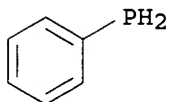


ACCESSION NUMBER: 1990:199231 CAPLUS  
 DOCUMENT NUMBER: 112:199231  
 TITLE: New conducting polymers. 1. Synthesis of a polymer containing phosphorus in the backbone  
 AUTHOR(S): Rahman, M. Safikur; Mahapatra, M. Madhumita; Maiti, Mrinal M.; Maiti, Sukumar  
 CORPORATE SOURCE: Mater. Sci. Cent., Indian Inst. Technol., Kharagpur, 721302, India  
 SOURCE: Journal of Polymer Materials (1989), 6(2), 135-8  
 CODEN: JOPME8; ISSN: 0970-0838  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB P(Ph)Cl<sub>2</sub> was reacted with Li metal to form P(Ph)Li<sub>2</sub> (I), acetylene was reacted with basic I<sub>2</sub> to form IC.tplbond.Cl (II), and I and II were then polycondensed to form (P(Ph)C.tplbond.C)<sub>n</sub>. The prepn. route offered poor stoichiometry control, which compromised the mol. wt. of the resulting polymer. IR anal. showed a band at 1200 cm<sup>-1</sup> characteristic of the P:C-bond, but there was no band characteristic of the C.tplbond.C linkage; this indicated that the polymer may have had a complex delocalized chain structure. The polymer should be conducting with proper doping.  
 IT 13595-56-7P, Dilithiumphenylphosphine  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, and polycondensation with diidoacetylene)  
 RN 13595-56-7 CAPLUS  
 CN Phosphine, phenyl-, dilithium salt (8CI, 9CI) (CA INDEX NAME)



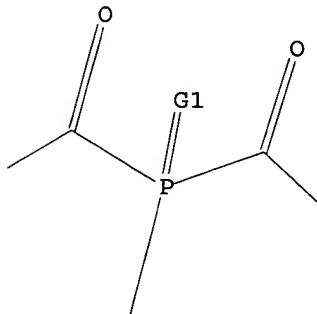
>  
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L1        STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1                STR



G1 O,S

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 17:51:29 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED -        82 TO ITERATE

100.0% PROCESSED        82 ITERATIONS

10 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:    ONLINE    \*\*COMPLETE\*\*

BATCH        \*\*COMPLETE\*\*

PROJECTED ITERATIONS:        1097 TO        2183

PROJECTED ANSWERS:            11 TO        389

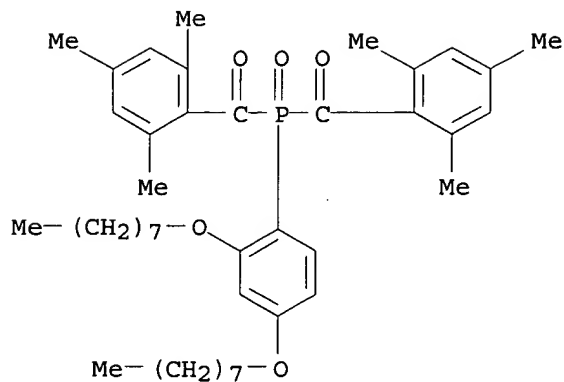
L2                10 SEA SSS SAM L1

=> d scan

L2    10 ANSWERS    REGISTRY    COPYRIGHT 2003 ACS on STN

IN    Phosphine oxide, [2,4-bis(octyloxy)phenyl]bis(2,4,6-trimethylbenzoyl) -  
      (9CI)

MF    C42 H59 O5 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> s l2

SAMPLE SEARCH INITIATED 17:51:40 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 82 TO ITERATE

100.0% PROCESSED 82 ITERATIONS  
SEARCH TIME: 00.00.01

10 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 1097 TO 2183  
PROJECTED ANSWERS: 11 TO 389

L3 10 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 17:51:45 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 1396 TO ITERATE

100.0% PROCESSED 1396 ITERATIONS  
SEARCH TIME: 00.00.01

174 ANSWERS

L4 174 SEA SSS FUL L1

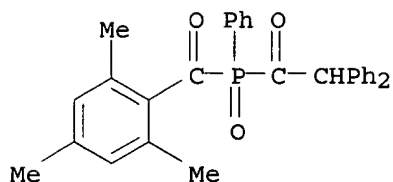
=> s can

23686 CAN  
11636 CANS

L5 23710 CAN  
(CAN OR CANS)

=> d scan l4

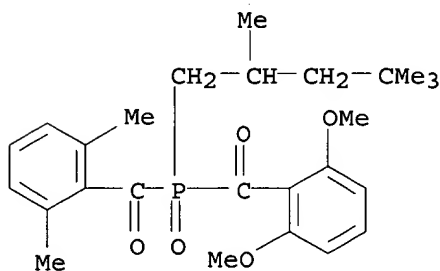
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Phosphine oxide, (diphenylacetyl)phenyl(2,4,6-trimethylbenzoyl) - (9CI)  
MF C30 H27 O3 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

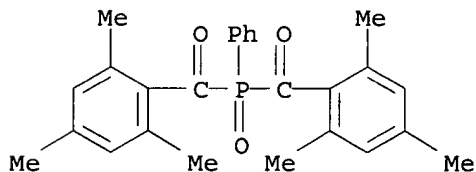
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, (2,6-dimethoxybenzoyl) (2,6-dimethylbenzoyl) (2,4,4-trimethylpentyl) - (9CI)  
 MF C26 H35 O5 P



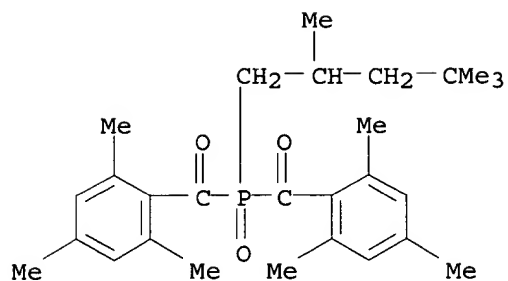
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl) - (9CI)  
 MF C26 H27 O3 P  
 CI COM



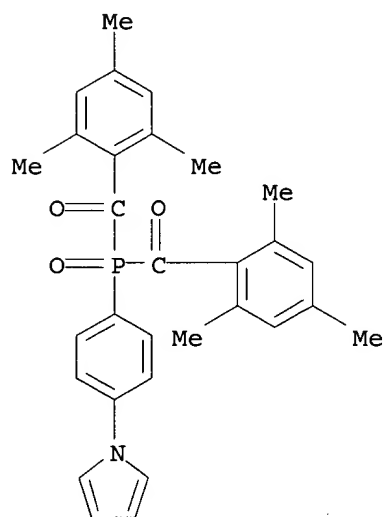
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, bis(2,4,6-trimethylbenzoyl) (2,4,4-trimethylpentyl) - (9CI)  
 MF C28 H39 O3 P



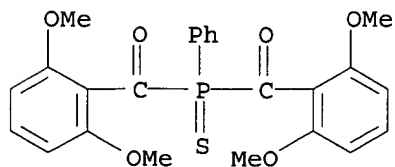
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN 1H-Pyrrole, 1-[4-[bis(2,4,6-trimethylbenzoyl)phosphinyl]phenyl] - (9CI)  
 MF C30 H30 N O3 P



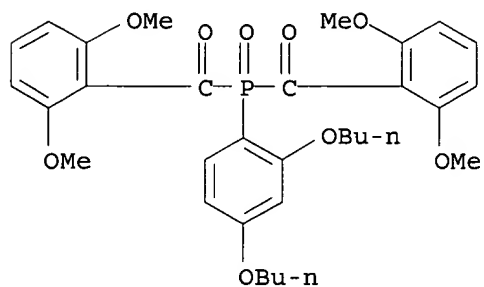
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI)  
 MF C24 H23 O6 P S



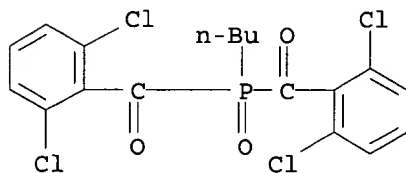
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Phosphine oxide, (2,4-dibutoxyphenyl)bis(2,6-dimethoxybenzoyl) - (9CI)  
MF C32 H39 O9 P



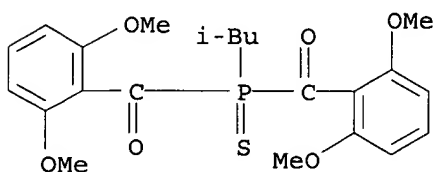
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Phosphine oxide, butylbis(2,6-dichlorobenzoyl) - (9CI)  
MF C18 H15 Cl4 O3 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

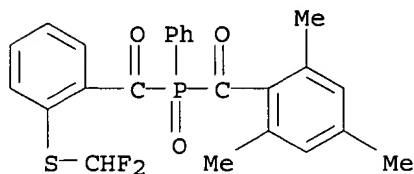
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)(2-methylpropyl) - (9CI)  
MF C22 H27 O6 P S



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

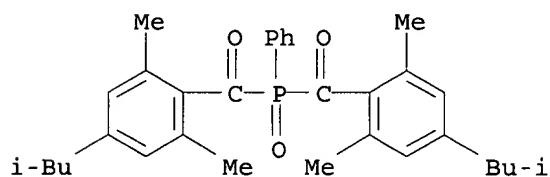
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN

IN Phosphine oxide, [2-[(difluoromethyl)thio]benzoyl]phenyl (2,4,6-trimethylbenzoyl)- (9CI)  
 MF C24 H21 F2 O3 P S



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

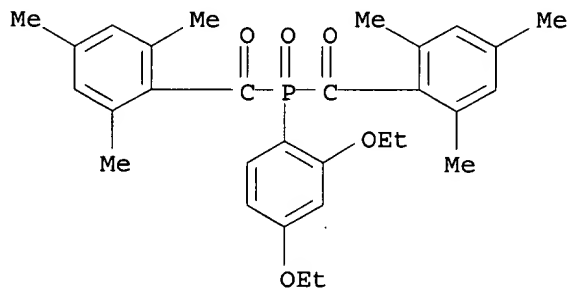
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, bis[2,6-dimethyl-4-(2-methylpropyl)benzoyl]phenyl- (9CI)  
 MF C32 H39 O3 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

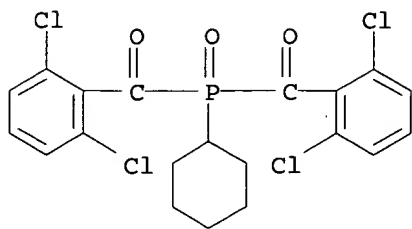
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, (2,4-diethoxyphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI)  
 MF C30 H35 O5 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

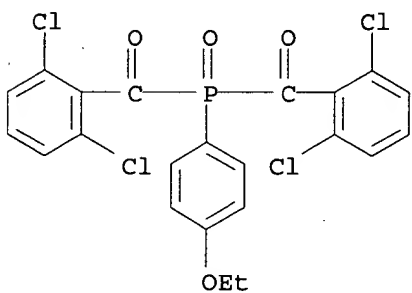
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, cyclohexylbis(2,6-dichlorobenzoyl)- (9CI)

MF C20 H17 Cl4 O3 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

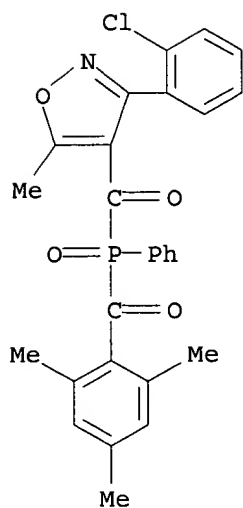
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Phosphine oxide, bis(2,6-dichlorobenzoyl) (4-ethoxyphenyl) - (9CI)  
MF C22 H15 Cl4 O4 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

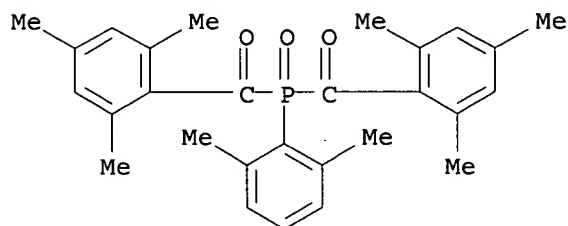
L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Isoxazole, 3-(2-chlorophenyl)-5-methyl-4-[[phenyl(2,4,6-trimethylbenzoyl)phosphinyl]carbonyl] - (9CI)  
MF C27 H23 Cl N O4 P





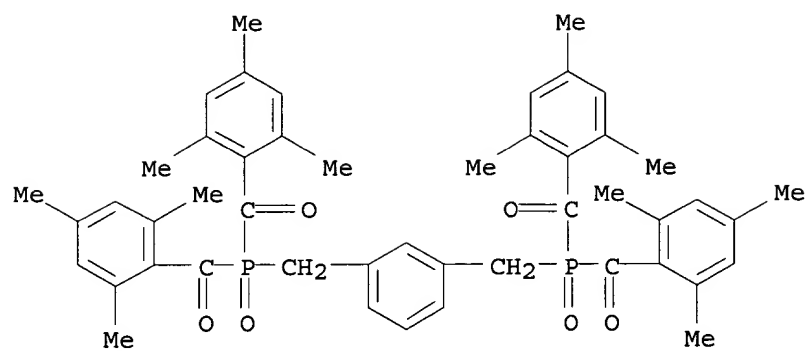
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, (2,6-dimethylphenyl)bis(2,4,6-trimethylbenzoyl) - (9CI)  
 MF C28 H31 O3 P



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L4 174 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
 IN Phosphine oxide, [1,3-phenylenebis(methylene)]bis[bis(2,4,6-trimethylbenzoyl) - (9CI)  
 MF C48 H52 O6 P2



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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L14      20 L13/PREP
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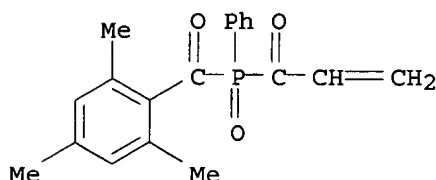
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L14 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:      2003:627928 CAPLUS
DOCUMENT NUMBER:       139:180191
TITLE:                 Preparation of acyl and bisacyl phosphine derivatives
INVENTOR(S):           Noe, Ralf; Henne, Andreas; Maase, Matthias
PATENT ASSIGNEE(S):    BASF A.-G., Germany
SOURCE:                Ger. Offen., 28 pp.
                        CODEN: GWXXBX
DOCUMENT TYPE:         Patent
LANGUAGE:              German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
```

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10206117	A1	20030814	DE 2002-10206117	20020213
WO 2003068784	A2	20030821	WO 2003-EP1053	20030204

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

```
PRIORITY APPLN. INFO.:      DE 2002-10206117 A 20020213
OTHER SOURCE(S):            CASREACT 139:180191; MARPAT 139:180191
AB  The prepn. of title compds., R1C(:Y)P(:Z)(R2)(FG) (Y = O, S, alkylamino,
    alkoxyamino, dialkylamino, etc.; Z = O, S, alkylamino, alkoxyamino,
    dialkylamino, free electron pair, etc., FG = leaving group, etc.), useful
    as photoinitiators, is described. Thus, reaction of Lucirin TPO-L with
    NaI in Et Me ketone followed by hydrolysis of the salt gave
    trimethylbenzoylphenylphosphinic acid. Chlorination of
    trimethylbenzoylphenylphosphinic acid with thionyl chloride followed by
    treatment with hydroxyethyl acrylate gave the title compd.
IT  577965-24-3P
    RL: SPN (Synthetic preparation); PREP (Preparation)
        (prepn. of acyl and bisacyl phosphine derivs.)
RN  577965-24-3 CAPLUS
CN  Phosphine oxide, (1-oxo-2-propenyl)phenyl(2,4,6-trimethylbenzoyl)- (9CI)
    (CA INDEX NAME)
```



L14 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2003:173928 CAPLUS

DOCUMENT NUMBER: 138:229271

TITLE: Bathochromic mono- and bis-acylphosphine oxides and sulfides as photoinitiators for polymerization of ethylenically unsaturated compounds

INVENTOR(S): Wolf, Jean-Pierre; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 87 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

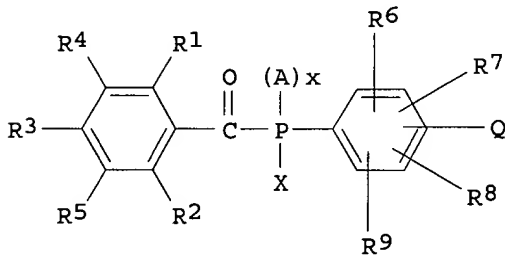
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003019295	A1	20030306	WO 2002-EP9045	20020813
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: CH 2001-1542 A 20010821

OTHER SOURCE(S): MARPAT 138:229271

GI



I

AB Disclosed are compds. of the general formula I (A = S, O; x = 0, 1; Q = SR10, N(R11)(R12); R1, R2 = C1-C24-alkyl, OR10, CF3, halogen; R3, R4, R5 = H, C1-C24-alkyl, OR10, halogen; two of the radicals R1, R2, R3, R4, and/or R5 together form C1-C20-alkylene substituted or unsubstituted by O, S, NR13; R6, R7, R8, R9 = H, C1-C24-alkyl, OR10, halogen, C2-C24-alkyl which is substituted one or more times by non-consecutive O, OH, SH; R10, R11 and R12 = H, C1-24-alkyl, C2-24-alkenyl, C3-8-cycloalkyl, Ph, benzyl, C2-20-alkyl; or R11 and R12 together with N form 5-6-membered ring which may contain O, S, NR13; R13 = aH, Ph, C1-12-alkoxy, C1-12-alkyl; and X is as further disclosed in the claims). The inventive compds. are suitable as photoinitiators for printing inks and optical fiber coatings photopolymerizable compns., as well as some other photopolymerizable compns., esp. for irradiation with light of relatively long wavelengths.

IT 500899-52-5P

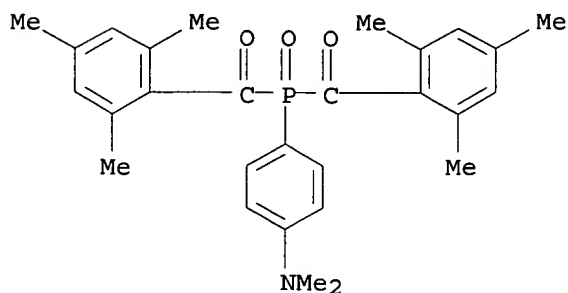
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);

**PREP (Preparation); USES (Uses)**

(synthesis of bathochromic acylphosphine oxides and sulfides and their application as photoinitiators)

RN 500899-52-5 CAPLUS

CN Benzenamine, 4-[bis(2,4,6-trimethylbenzoyl)phosphinyl]-N,N-dimethyl- (9CI)  
(CA INDEX NAME)



IT 500899-51-4P 500899-54-7P 500899-55-8P

500899-56-9P 500899-57-0P

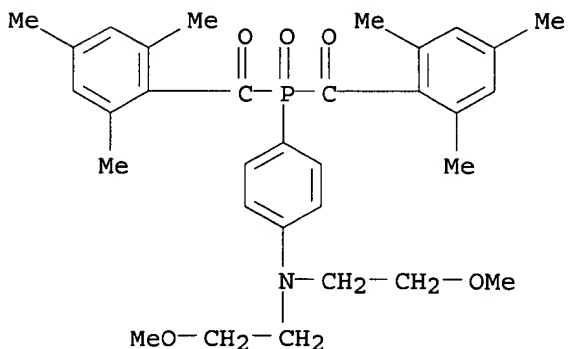
RL: PRP (Properties); SPN (Synthetic preparation); **PREP**

**(Preparation)**

(synthesis of bathochromic acylphosphine oxides and sulfides and their application as photoinitiators)

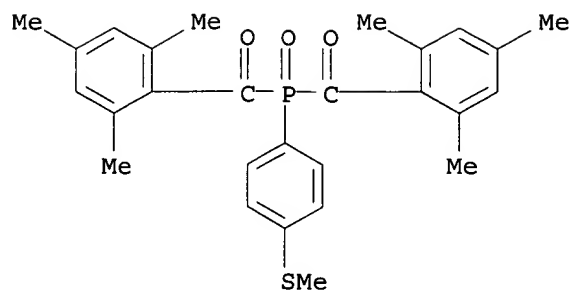
RN 500899-51-4 CAPLUS

CN Benzenamine, 4-[bis(2,4,6-trimethylbenzoyl)phosphinyl]-N,N-bis(2-methoxyethyl)- (9CI) (CA INDEX NAME)



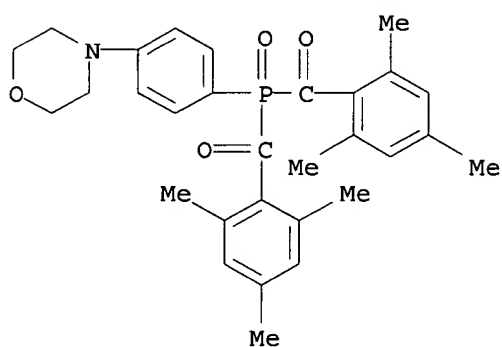
RN 500899-54-7 CAPLUS

CN Phosphine oxide, [4-(methylthio)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI)  
(CA INDEX NAME)



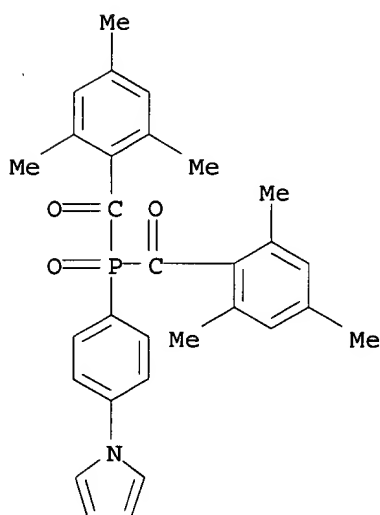
RN 500899-55-8 CAPLUS

CN Morpholine, 4-[4-[bis(2,4,6-trimethylbenzoyl)phosphinyl]phenyl] - (9CI)  
(CA INDEX NAME)



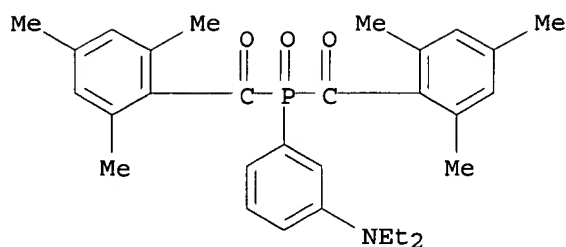
RN 500899-56-9 CAPLUS

CN 1H-Pyrrole, 1-[4-[bis(2,4,6-trimethylbenzoyl)phosphinyl]phenyl] - (9CI)  
(CA INDEX NAME)



RN 500899-57-0 CAPLUS

CN Benzenamine, 3-[bis(2,4,6-trimethylbenzoyl)phosphinyl]-N,N-diethyl- (9CI)  
(CA INDEX NAME)

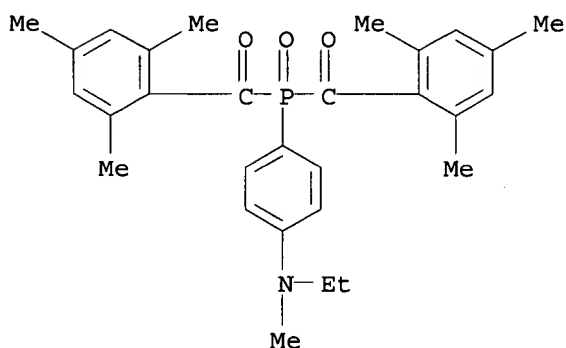


IT 500899-53-6P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(synthesis of bathochromic acylphosphine oxides and sulfides and their application as photoinitiators)

RN 500899-53-6 CAPLUS

CN Benzenamine, 4-[bis(2,4,6-trimethylbenzoyl)phosphinyl]-N-ethyl-N-methyl-  
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:314996 CAPLUS

DOCUMENT NUMBER: 136:348306

TITLE: Photosensitive resin composition, solder resist comprising the same, cover lay film, and printed circuit board

INVENTOR(S): Okada, Koji; Takagahara, Kaoru

PATENT ASSIGNEE(S): Kaneka Corporation, Japan

SOURCE: PCT Int. Appl., 124 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032966	A1	20020425	WO 2001-JP9053	20011015
W: KR, US				
JP 2002121207	A2	20020423	JP 2000-315946	20001016
JP 2002162740	A2	20020607	JP 2000-356492	20001122
JP 2002164642	A2	20020607	JP 2000-360199	20001127
JP 2002278065	A2	20020927	JP 2001-78201	20010319
JP 2002258474	A2	20020911	JP 2001-163470	20010530

## PRIORITY APPLN. INFO.:

JP 2000-315946 A 20001016  
JP 2000-356492 A 20001122  
JP 2000-360199 A 20001127  
JP 2000-400072 A 20001228  
JP 2001-78201 A 20010319  
JP 2001-163470 A 20010530

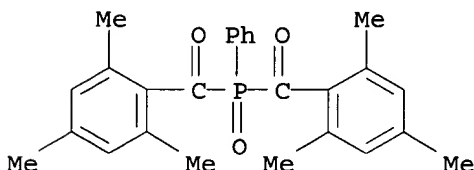
AB The invention relates to a photosensitive resin compn. excellent in heat resistance, processability and adhesion which is used for a solder resist, a cover lay film and a printed circuit board. The cover lay film has excellent processability and adhesion at relatively low temps. while retaining sufficient mech. strength, gives a cured film having a low modulus, and is suitable for use in producing printed boards or hard disks. The solder resist is sol., can be laminated at a temp. not higher than 150.degree., and can be applied directly to an FPC without through an adhesive. The cover lay film is excellent in various properties including heat resistance and causes little warpage when laminated to an FPC. The photosensitive resin compn. comprises: (a) a polyimide sol. in a solvent having a b.p..ltoreq.120.degree. and (b) a compd. having .gtoreq.1 arom. ring and .gtoreq.2 double bonds per mol., wherein the polyimide is obtained from an acid dianhydride having 1-6 arom. rings or alicyclic acid dianhydride and/or a diamine having 1-6 arom. rings. The solder resist, cover lay film, etc. are excellent in heat resistance and mech. properties and do not damage the substrates because they can be laminated at a relatively low temp.

IT 162881-26-7DP, Bis(2,4,6-trimethylbenzoyl)-phenylphosphine oxide, polymer with diaminosiloxane-modified polyimide  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(photosensitive resin compn. contg. sol. polyimide for solder resist and printed circuit board)

RN 162881-26-7 CAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2001:903396 CAPLUS

DOCUMENT NUMBER: 136:20158

TITLE: Preparation of organometallic monoacyl alkyl phosphines as photoinitiators

INVENTOR(S): Wolf, Jean-Pierre; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: Ger. Offen., 64 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10127171	A1	20011213	DE 2001-10127171	20010605
GB 2365430	A1	20020220	GB 2001-12580	20010524



GB 2365430	B2	20020828		
US 2002026049	A1	20020228	US 2001-871373	20010531
FR 2810041	A1	20011214	FR 2001-7438	20010607
CN 1329005	A	20020102	CN 2001-120898	20010607
BE 1014218	A5	20030603	BE 2001-389	20010607
NL 1018251	A1	20011214	NL 2001-1018251	20010608
NL 1018251	C2	20020218		
JP 2002069085	A2	20020308	JP 2001-174045	20010608
BR 2001002319	A	20020528	BR 2001-2319	20010608
US 2003130370	A1	20030710	US 2002-280819	20021025
US 2003139485	A1	20030724	US 2002-280820	20021025
PRIORITY APPLN. INFO.:			CH 2000-1133	A 20000608
			US 2001-871373	A3 20010531

OTHER SOURCE(S): CASREACT 136:20158; MARPAT 136:20158

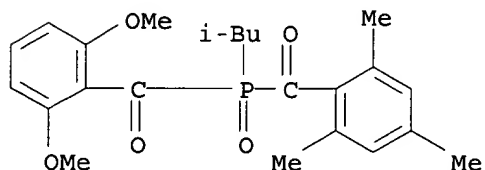
AB The prepn. of title compds., ArcOP(M)R (Ar = (un)substituted cyclopentyl, cyclohexyl, naphthyl, biphenyl, O-, S-, N-contg. 5 or 6-membered heterocyclic ring, etc.; R = (un)substituted C1-24 alkyl, O-, S-, N-contg. C2-24 alkyl, alkenyl, (un)substituted C7-24-arylalkyl, C4-24-cycloalkyl, C8-24-arylalkyl, etc.; M = H, Li, Na, K), useful as photoinitiators, is described. Thus, lithiation of isobutylphosphine with BuLi in THF/PhMe followed by treatment with 2,4,6-trimethylbenzoyl chloride gave lithium (2,4,6-trimethylbenzoyl)isobutylphosphine. Reaction of lithium (2,4,6-trimethylbenzoyl)isobutylphosphine with Bu bromide gave title compd., 2,4,6-C<sub>6</sub>H<sub>2</sub>COP(O)(Bu)(iso-Bu).

IT 178817-17-9P 378793-88-5P

RL: PRP (Properties); SPN (Synthetic preparation); **PREP**  
(Preparation)  
(prepn. as photoinitiator)

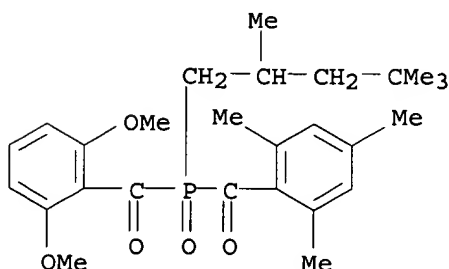
RN 178817-17-9 CAPLUS

CN Phosphine oxide, (2,6-dimethoxybenzoyl)(2-methylpropyl)(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 378793-88-5 CAPLUS

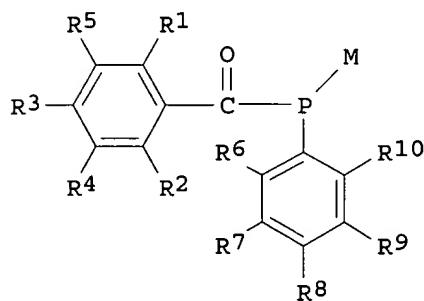
CN Phosphine oxide, (2,6-dimethoxybenzoyl)(2,4,6-trimethylbenzoyl)(2,4,4-trimethylpentyl)- (9CI) (CA INDEX NAME)



TITLE: Preparation of organometallic monoacyl aryl phosphines as photoinitiators  
 INVENTOR(S): Wolf, Jean-pierre; Aebli, Beat Michael; Hug, Gebhard  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: Ger. Offen., 84 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10105046	A1	20010809	DE 2001-10105046	20010205
GB 2360283	A1	20010919	GB 2001-2398	20010131
GB 2360283	B2	20020821		
US 2001031898	A1	20011018	US 2001-776657	20010205
US 6399805	B2	20020604		
CA 2334291	AA	20010808	CA 2001-2334291	20010206
BE 1013960	A3	20030114	BE 2001-87	20010206
CN 1308081	A	20010815	CN 2001-103487	20010207
NL 1017310	A1	20010809	NL 2001-1017310	20010208
NL 1017310	C2	20020618		
BR 2001000910	A	20011002	BR 2001-910	20010208
JP 2001270894	A2	20011002	JP 2001-31650	20010208
US 2002107413	A1	20020808	US 2001-37111	20011022
US 6579663	B2	20030617		

PRIORITY APPLN. INFO.: CH 2000-255 A 20000208  
 US 2001-776657 A3 20010205  
 OTHER SOURCE(S): CASREACT 135:152962; MARPAT 135:152962  
 GI



I

AB The prepn. of title compds., I (R1, R2 = C1-20 alkyl, OR11, CF3, halo, etc.; R3, R4, R5 = H, C1-20 alkyl, OR11, halo, etc.; R6, R7, R8, R9, R10 = H, O, OH, and SH substituted C1-20 alkyl, C2-20 alkyl, N(R12)(R13), Ph, halo, etc.; R11 = C1-20 alkyl, C3-8 cycloalkyl, Ph, benzyl, C2-20 alkyl, etc.; R12, R13 = H, C1-20 alkyl, C3-8 cycloalkyl, Ph, benzyl, C2-20 alkyl, R12-R13 = O, S, amino substituted C3-5 alkylene; M = H, Li, Na, K), useful as acylphosphine oxide photoinitiators, is described. Thus, lithiation of dichloro(phenyl)phosphine with Li in THF in the presence of naphthalene followed by treatment with 2,4,6-trimethylbenzoyl chloride gave lithium (2,4,6-trimethylbenzoyl)phenylphosphine. Reaction of lithium (2,4,6-trimethylbenzoyl)phenylphosphine with 2,6-dimethoxybenzoyl chloride in THF followed by oxidn. with H2O2 gave title compd., 2,4,6-trimethylbenzoyl(2,6-dimethoxybenzoyl)phosphine oxide.

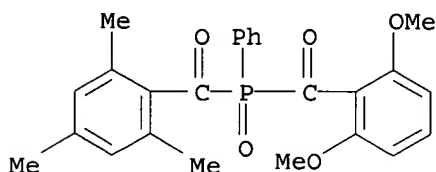
IT 352706-39-9P 352706-40-2P 352706-41-3P  
 352706-42-4P 352706-43-5P 352706-44-6P  
 352706-45-7P 352706-49-1P 352706-50-4P  
 352706-51-5P 352706-52-6P 352706-53-7P  
 352706-54-8P 352706-55-9P 352706-56-0P  
 352706-57-1P 352706-58-2P 352706-61-7P  
 352706-62-8P 352706-63-9P 352706-64-0P

RL: PRP (Properties); SPN (Synthetic preparation); **PREP**  
 (Preparation)

(prepn. as acylphosphine oxide photoinitiator)

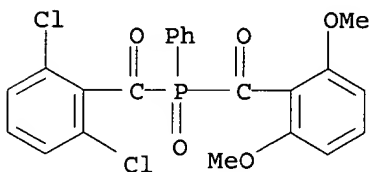
RN 352706-39-9 CAPLUS

CN Phosphine oxide, (2,6-dimethoxybenzoyl)phenyl(2,4,6-trimethylbenzoyl)-  
 (9CI) (CA INDEX NAME)



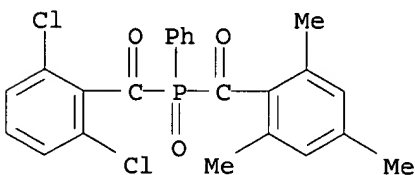
RN 352706-40-2 CAPLUS

CN Phosphine oxide, (2,6-dichlorobenzoyl)(2,6-dimethoxybenzoyl)phenyl- (9CI)  
 (CA INDEX NAME)



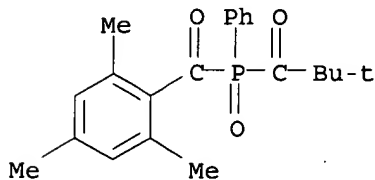
RN 352706-41-3 CAPLUS

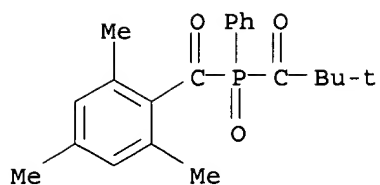
CN Phosphine oxide, (2,6-dichlorobenzoyl)phenyl(2,4,6-trimethylbenzoyl)-  
 (9CI) (CA INDEX NAME)



RN 352706-42-4 CAPLUS

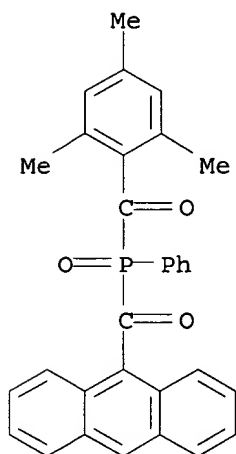
CN Phosphine oxide, (2,2-dimethyl-1-oxopropyl)phenyl(2,4,6-trimethylbenzoyl)-  
 (9CI) (CA INDEX NAME)





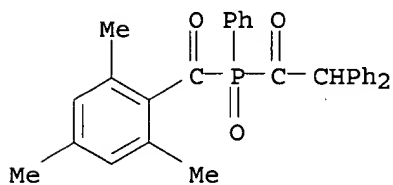
RN 352706-43-5 CAPLUS

CN Phosphine oxide, (9-anthracenylcarbonyl)phenyl (2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



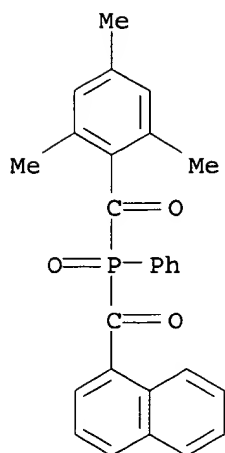
RN 352706-44-6 CAPLUS

CN Phosphine oxide, (diphenylacetyl)phenyl (2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



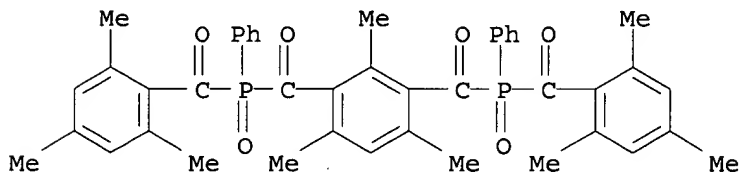
RN 352706-45-7 CAPLUS

CN Phosphine oxide, (1-naphthalenylcarbonyl)phenyl (2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



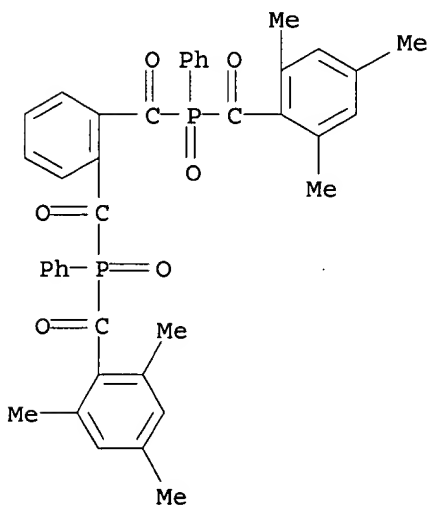
RN 352706-49-1 CAPLUS

CN Phosphine oxide, [(2,4,6-trimethyl-1,3-phenylene)dicarbonyl]bis[phenyl (2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



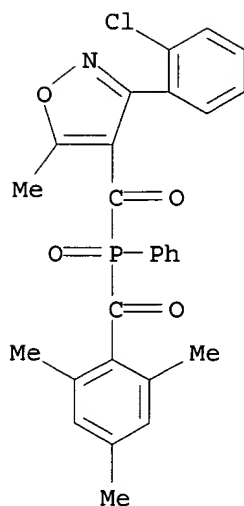
RN 352706-50-4 CAPLUS

CN Phosphine oxide, (1,2-phenylenedicarbonyl)bis[phenyl (2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



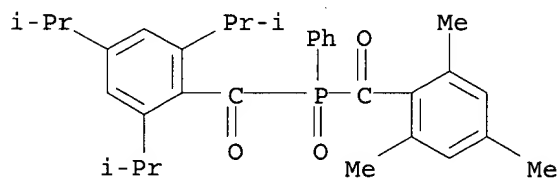
RN 352706-51-5 CAPLUS

CN Isoxazole, 3-(2-chlorophenyl)-5-methyl-4-[[phenyl (2,4,6-trimethylbenzoyl)phosphinyl]carbonyl]- (9CI) (CA INDEX NAME)



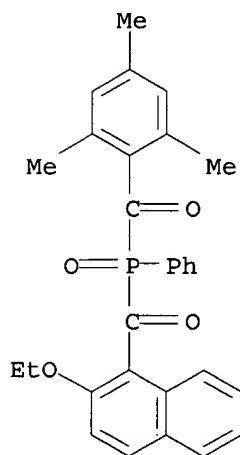
RN 352706-52-6 CAPLUS

CN Phosphine oxide, phenyl(2,4,6-trimethylbenzoyl)[2,4,6-tris(1-methylethyl)benzoyl]- (9CI) (CA INDEX NAME)



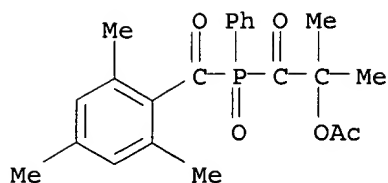
RN 352706-53-7 CAPLUS

CN Phosphine oxide, [(2-ethoxy-1-naphthalenyl)carbonyl]phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



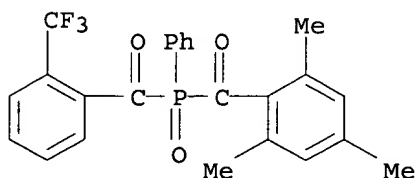
RN 352706-54-8 CAPLUS

CN 2-Propanol, 2-methyl-1-oxo-1-[phenyl(2,4,6-trimethylbenzoyl)phosphinyl]-, acetate (9CI) (CA INDEX NAME)



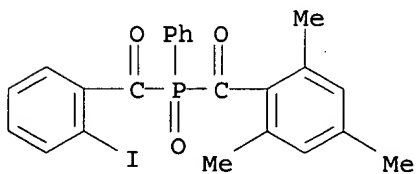
RN 352706-55-9 CAPLUS

CN Phosphine oxide, phenyl[2-(trifluoromethyl)benzoyl](2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



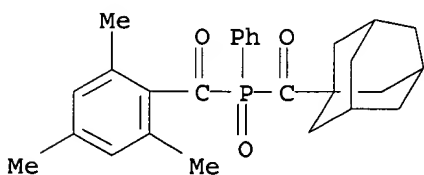
RN 352706-56-0 CAPLUS

CN Phosphine oxide, (2-iodobenzoyl)phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



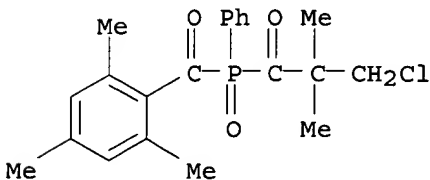
RN 352706-57-1 CAPLUS

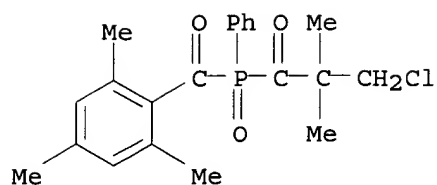
CN Phosphine oxide, phenyl(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylcarbonyl)(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 352706-58-2 CAPLUS

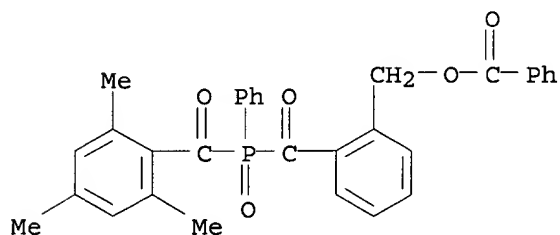
CN Phosphine oxide, (3-chloro-2,2-dimethyl-1-oxopropyl)phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)





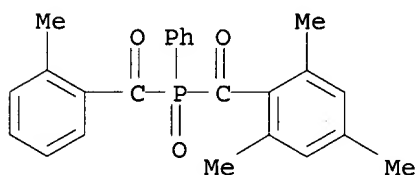
RN 352706-61-7 CAPLUS

CN Benzenemethanol, 2-[[phenyl(2,4,6-trimethylbenzoyl)phosphinyl]carbonyl]-, benzoate (9CI) (CA INDEX NAME)



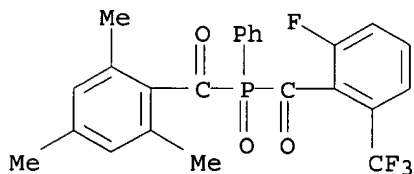
RN 352706-62-8 CAPLUS

CN Phosphine oxide, (2-methylbenzoyl)phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 352706-63-9 CAPLUS

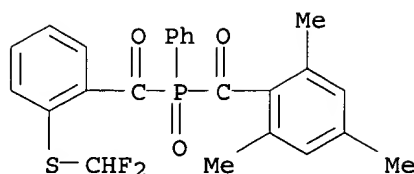
CN Phosphine oxide, [2-fluoro-6-(trifluoromethyl)benzoyl]phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 352706-64-0 CAPLUS

CN Phosphine oxide, [2-[(difluoromethyl)thio]benzoyl]phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)





L14 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2000:408834 CAPLUS  
 DOCUMENT NUMBER: 133:43973  
 TITLE: Combination of photoinitiators for crosslinking of  
 photopolymerizable compositions without yellowing  
 INVENTOR(S): Koehler, Manfred; Wolf, Jean-Pierre; Litzler, Andre;  
 Tolotti, Guido; Hoeck, Nils  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding, Inc., Switz.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000169511	A2	20000620	JP 1999-344013	19991203
US 6251963	B1	20010626	US 1999-453356	19991201
US 2001036978	A1	20011101	US 2001-820105	20010328
US 6486228	B2	20021126		

PRIORITY APPLN. INFO.: CH 1998-2399 A 19981203  
 CH 1999-453 A 19990311  
 US 1999-453356 A3 19991201

OTHER SOURCE(S): MARPAT 133:43973

AB The combination contains (2,4,6-R1R2R1C6H2CO)2P(O)R3 and/or  
 2,4,6-R1R2R1C6H2COP(O)R9R10 (R1 = C1-4 alkyl, C1-4 alkoxy, halo; R2 = H,  
 R1; R3, R9 = C1-20 alkyl, cyclopentyl, phenyl-C1-4 alkyl, etc.; R10 =  
 C1-20 alkyl, C1-20 alkoxy, etc.). Thus, a mixt. contg. Ebecryl 830  
 (polyester acrylate oligomer), hexanediol diacrylate, trimethylolpropane  
 triacrylate, R TC2 (TiO2), 2,4,6-trimethylbenzoyl ethoxyphenylphosphine  
 oxide, and bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide was applied on  
 a plate, dried, and UV-cured to give a white coating with high hardness.

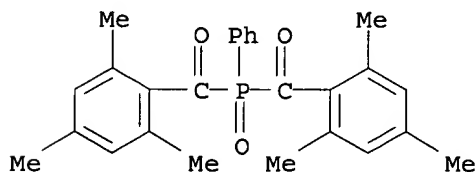
IT 162881-26-7P, Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide

RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP**  
 (Preparation); USES (Uses)

(acylphosphine oxide photoinitiators for crosslinking of  
 photopolymerizable compns. without yellowing)

RN 162881-26-7 CAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 2000:384210 CAPLUS

DOCUMENT NUMBER: 133:4802  
 TITLE: Process for preparing acylphosphines and derivatives  
 INVENTOR(S): Leppard, David George; Eichenberger, Eugen; Kaeser, Rene; Hug, Gebhard; Schwendimann, Urs  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 30 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000032612	A1	20000608	WO 1999-EP8968	19991120
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1135399	A1	20010926	EP 1999-973034	19991120
EP 1135399	B1	20020807		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 221893	E	20020815	AT 1999-973034	19991120
JP 2002531460	T2	20020924	JP 2000-585253	19991120
ES 2180347	T3	20030201	ES 1999-973034	19991120
AU 760237	B2	20030508	AU 2000-13845	19991120
TW 492972	B	20020701	TW 1999-88120769	19991129
PRIORITY APPLN. INFO.:			CH 1998-2376	A 19981130
			CH 1998-2434	A 19981208
			WO 1999-EP8968	W 19991120

OTHER SOURCE(S): MARPAT 133:4802

AB A description is given of processes for the prepn. of mono- and bisacylphosphines and of mono- and bisacylphosphine oxides and mono- and bisacylphosphine sulfides, which comprises 1st reacting org. P-monohalophosphines or P,P-dihalophosphines, or mixts. thereof, with an alkali metal or Mg in combination with Li, where appropriate in the presence of a catalyst, and then carrying out the reaction with acid halides and, in the case of the process for the prepn. of oxides, carrying out an oxidn. step and, in the case of the prepn. of sulfides, reacting the phosphines so obtained with S. It is characteristic, inter alia, that the processes are carried out without isolation of the intermediates. E.g.,  $\text{PhPCl}_2$  was lithiated and treated with 2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>COCl followed by oxidn. with H<sub>2</sub>O<sub>2</sub> to give 85% (2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CO)<sub>2</sub>P(O)Ph. Among the approx. 20 compds. similarly prepd. were 89% (2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CO)<sub>2</sub>P(S)Ph and 68% 2,6-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>COP(O)Ph<sub>2</sub>.

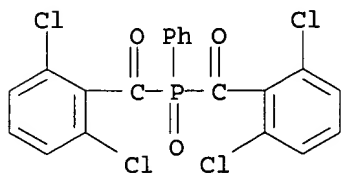
IT 104890-00-8P, Bis(2,6-dichlorobenzoyl)phenylphosphine oxide  
 104890-05-3P, Bis(2,6-dimethoxybenzoyl)phenylphosphine oxide  
 151249-76-2P, Bis(2,4,6-trimethylbenzoyl)isobutylphosphine oxide  
 151249-80-8P 151249-82-0P, Bis(2,4,6-trimethylbenzoyl)octylphosphine oxide 162881-26-7P,  
 Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide 176251-37-9P,  
 Bis(2,4,6-trimethylbenzoyl)(2,4-dipentoxyphenyl)phosphine oxide  
 270586-71-5P, Bis(2,4,6-trimethylbenzoyl)phenylphosphine sulfide  
 270586-72-6P, Bis(2,6-dimethoxybenzoyl)phenylphosphine sulfide  
 270586-73-7P 270586-74-8P, Bis(2,4,6-trimethylbenzoyl)ethylphosphine oxide 270586-75-9P,  
 Bis(2,4,6-trimethylbenzoyl)(2-ethylhexyl)phosphine oxide  
 270586-76-0P, Bis(2,4,6-trimethylbenzoyl)(propen-1-yl)phosphine

oxide

RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(prepn. of acylphosphines)

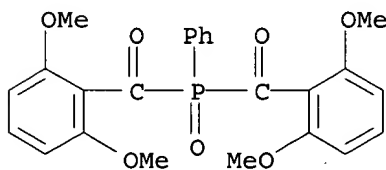
RN 104890-00-8 CAPLUS

CN Phosphine oxide, bis(2,6-dichlorobenzoyl)phenyl- (9CI) (CA INDEX NAME)



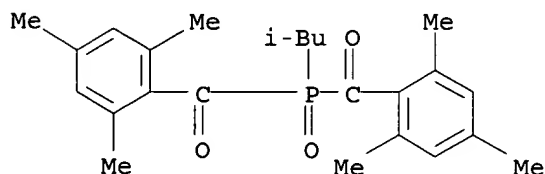
RN 104890-05-3 CAPLUS

CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI) (CA INDEX NAME)



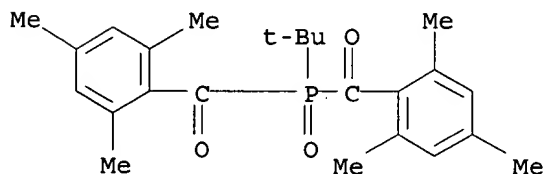
RN 151249-76-2 CAPLUS

CN Phosphine oxide, (2-methylpropyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



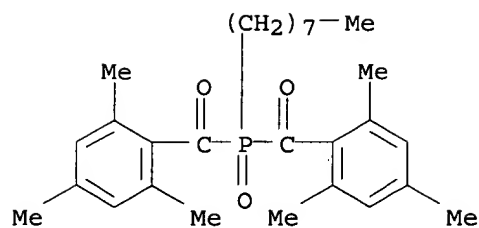
RN 151249-80-8 CAPLUS

CN Phosphine oxide, (1,1-dimethylethyl)bis(2,4,6-trimethylbenzoyl)- (9CI)  
(CA INDEX NAME)



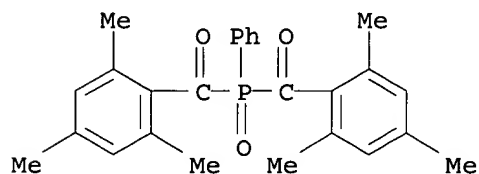
RN 151249-82-0 CAPLUS

CN Phosphine oxide, octylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



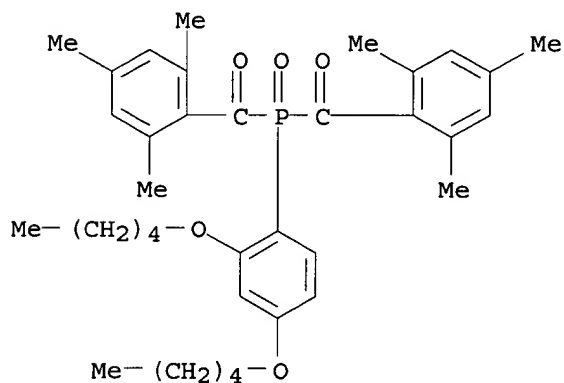
RN 162881-26-7 CAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



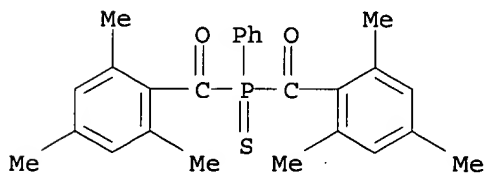
RN 176251-37-9 CAPLUS

CN Phosphine oxide, [2,4-bis(pentyloxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



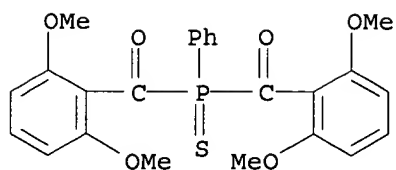
RN 270586-71-5 CAPLUS

CN Phosphine sulfide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



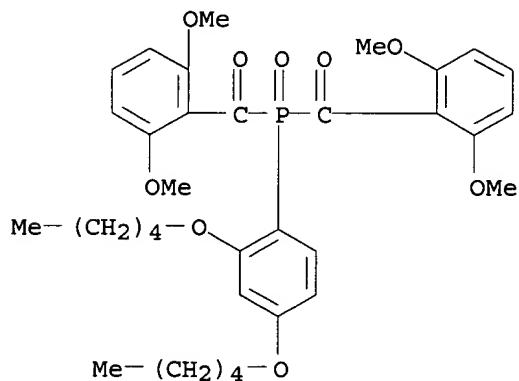
RN 270586-72-6 CAPLUS

CN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI) (CA INDEX NAME)



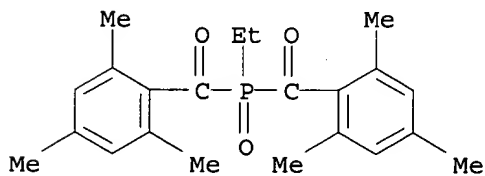
RN 270586-73-7 CAPLUS

CN Phosphine oxide, [2,4-bis(pentyloxy)phenyl]bis(2,6-dimethoxybenzoyl) - (9CI) (CA INDEX NAME)



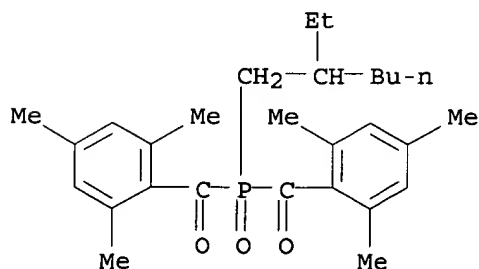
RN 270586-74-8 CAPLUS

CN Phosphine oxide, ethylbis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



RN 270586-75-9 CAPLUS

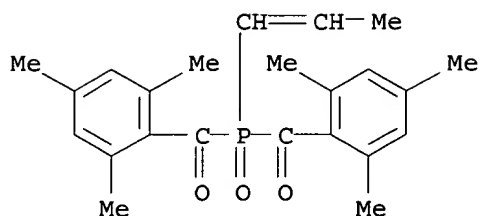
CN Phosphine oxide, (2-ethylhexyl)bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



RN 270586-76-0 CAPLUS

CN Phosphine oxide, 1-propenylbis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)

NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1999:559193 CAPLUS

DOCUMENT NUMBER: 132:180924

TITLE: Synthesis and characterization of macrophotoinitiators and block copolymers derived from bisacylphosphine oxides

AUTHOR(S): Wyzgoski, Faith; Meng, Huihan; Rinaldi, Peter L.; Harwood, H. James

CORPORATE SOURCE: Department of Polymer Science, The University of Akron, Akron, OH, 44325-3909, USA

SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(2), 1028-1029  
CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

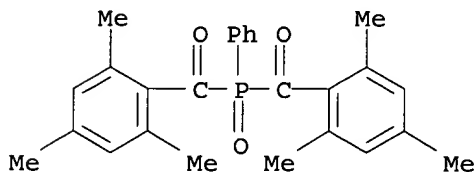
AB Polystyrene macrophotoinitiators with acylphosphine oxide end groups were prepd. by irradiation of bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide (I-819) with a 500 W tungsten lamp in the presence of styrene monomer. The polystyrene macrophotoinitiator was subsequently photolyzed in the presence of Me methacrylate to form a block copolymer. The phosphorus-contg. chain ends of the macrophotoinitiators and the in-chain phosphorus-contg. junctions of the block copolymer were analyzed by 121 MHz P-NMR techniques. Deuterated and unlabeled polystyrene macrophotoinitiators were also characterized by high resolu. 750 MHz 3D (C/H/P) NMR spectroscopy. Evidence for block copolymer formation was provided by 1D 300 MHz H- and 121 MHz P-NMR results and by GPC anal. that showed marked increases in no. and wt. av. mol. wts. for the block copolymer as compared to those of the polystyrene macrophotoinitiator.

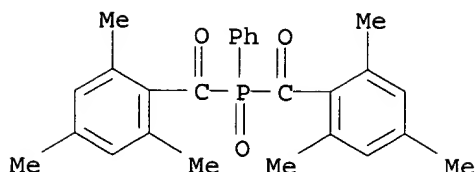
IT 162881-26-7DP, Irgacure 819, reaction products with polystyrene  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process);  
SPN (Synthetic preparation); PREP (Preparation); PROC (Process);  
USES (Uses)

(synthesis and characterization of acylphosphine oxide-terminated polystyrene macrophotoinitiators and block copolymers derived from them)

RN 162881-26-7 CAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1997:638442 CAPLUS

DOCUMENT NUMBER: 127:264273

TITLE: (Alylphenyl)dibenzoylphosphine oxides for use as photoinitiators

INVENTOR(S): Leppard, David George; Koehler, Manfred; Valet, Andreas

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Ger. Offen., 23 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19708294	A1	19970911	DE 1997-19708294	19970228
SE 9700616	A	19971104	SE 1997-616	19970221
SE 520727	C2	20030819		
CH 691970	A	20011215	CH 1997-408	19970221
GB 2310855	A1	19970910	GB 1997-3896	19970225
GB 2310855	B2	19991027		
US 6020528	A	20000201	US 1997-806498	19970226
DK 9700217	A	19970905	DK 1997-217	19970227
CA 2198803	AA	19970904	CA 1997-2198803	19970228
BE 1011437	A5	19990907	BE 1997-178	19970228
FR 2745575	A1	19970905	FR 1997-2478	19970303
FR 2745575	B1	19991119		
NL 1005424	A1	19970905	NL 1997-1005424	19970303
NL 1005424	C2	19990322		
NO 9700962	A	19970905	NO 1997-962	19970303
ZA 9701810	A	19970916	ZA 1997-1810	19970303
CN 1160718	A	19971001	CN 1997-102866	19970303
CN 1092201	B	20021009		
AT 9700362	A	19980615	AT 1997-362	19970303
AT 404729	B	19990225		
BR 9701154	A	19981215	BR 1997-1154	19970303
ES 2132018	A1	19990801	ES 1997-453	19970303
ES 2132018	B1	20000401		
TW 408136	B	20001011	TW 1997-86102489	19970303
JP 10029997	A2	19980203	JP 1997-65317	19970304
RU 2180667	C2	20020320	RU 1997-103536	19970304
US 6284813	B1	20010904	US 1998-9827	19980120
US 6361925	B1	20020326	US 2001-861433	20010518
US 2002042022	A1	20020411		

PRIORITY APPLN. INFO.:

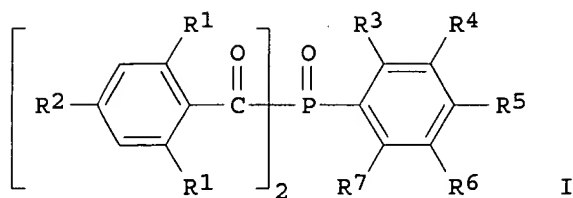
CH 1996-558 A 19960304

US 1997-806498 A3 19970226

US 1998-9827 A3 19980120

OTHER SOURCE(S): MARPAT 127:264273

GI



AB The title compds. I (R1 = alkyl; R2 = H, alkyl, alkoxy; R3-7 = H, halogen, alkyl, cycloalkyl, alkenyl, optionally contg. ether groups) are useful as photoinitiators, esp. in coating compns. The NiCl<sub>2</sub>-catalyzed reaction of 51.3 g 4-BrC<sub>6</sub>H<sub>4</sub>Me with 74.8 g (EtO)<sub>3</sub>P gave 38.6 g di-Et (4-methylphenyl)phosphonate, redn. of 16.43 g of which with LiAlH<sub>4</sub> gave 9.0 g 4-BrC<sub>6</sub>H<sub>3</sub>PH<sub>2</sub>, acylation of which with 29.22 g 2,4,6-trimethylbenzoyl chloride in the presence of iso-Pr<sub>2</sub>NH and BuLi gave 28.0 g (4-methylphenyl)bis(2,4,6-trimethylbenzoyl)phosphine, oxidn. of which with H<sub>2</sub>O<sub>2</sub> gave the corresponding P-oxide. Use of the products in coatings and unsatd. polyesters is exemplified.

IT 162881-26-7P 195834-01-6P 195834-03-8P

195834-04-9P 195834-05-0P 195834-06-1P

195834-07-2P 195834-08-3P 195834-09-4P

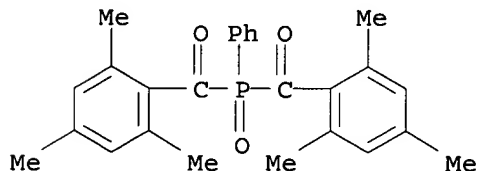
RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP**

(**Preparation**); USES (Uses)

((alkylphenyl)dibenzoylphosphine oxides for use as photoinitiators)

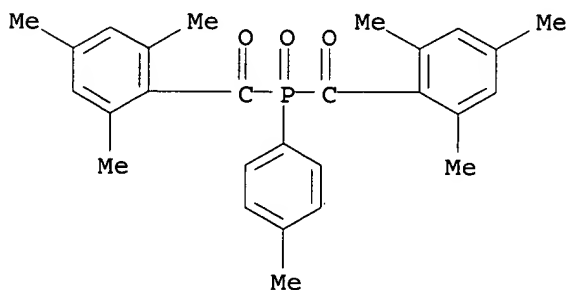
RN 162881-26-7 CAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 195834-01-6 CAPLUS

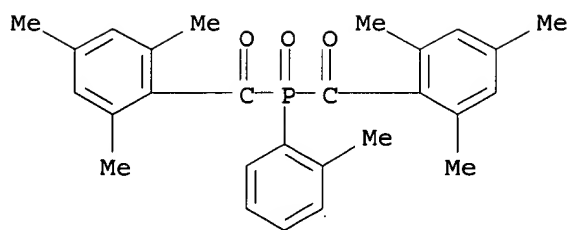
CN Phosphine oxide, (4-methylphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 195834-03-8 CAPLUS

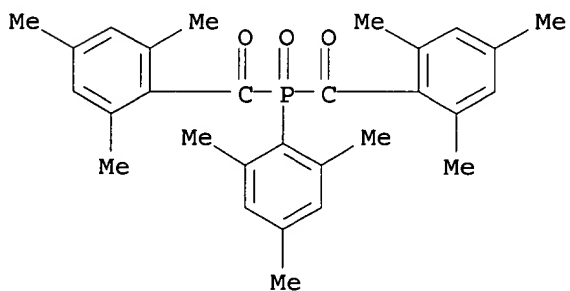
CN Phosphine oxide, (2-methylphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)





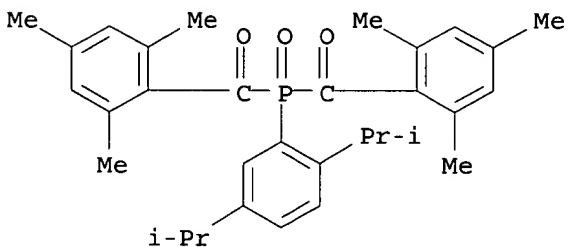
RN 195834-04-9 CAPLUS

CN Phosphine oxide, bis(2,4,6-trimethylbenzoyl) (2,4,6-trimethylphenyl) - (9CI)  
(CA INDEX NAME)



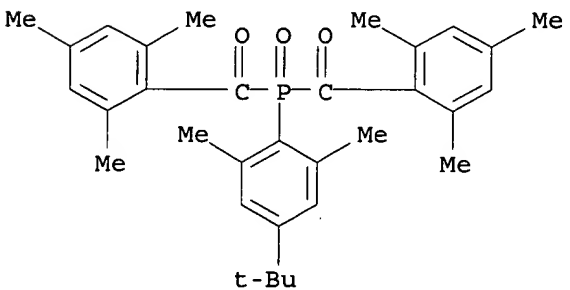
RN 195834-05-0 CAPLUS

CN Phosphine oxide, [2,5-bis(1-methylethyl)phenyl]bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)

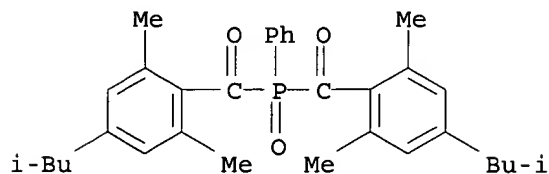


RN 195834-06-1 CAPLUS

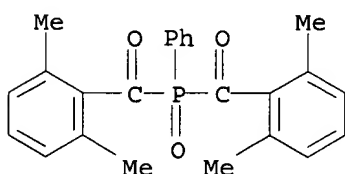
CN Phosphine oxide, [4-(1,1-dimethylethyl)-2,6-dimethylphenyl]bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



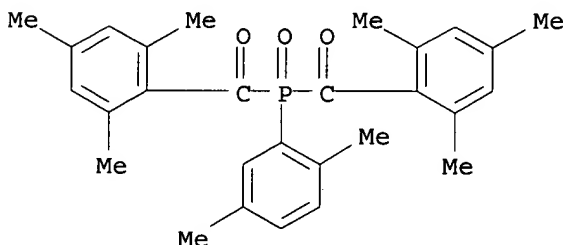
RN 195834-07-2 CAPLUS  
 CN Phosphine oxide, bis[2,6-dimethyl-4-(2-methylpropyl)benzoyl]phenyl- (9CI)  
 (CA INDEX NAME)



RN 195834-08-3 CAPLUS  
 CN Phosphine oxide, bis(2,6-dimethylbenzoyl)phenyl- (9CI) (CA INDEX NAME)



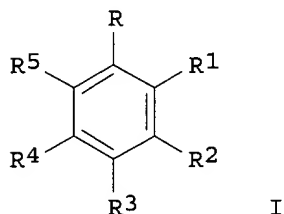
RN 195834-09-4 CAPLUS  
 CN Phosphine oxide, (2,5-dimethylphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI)  
 (CA INDEX NAME)



L14 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1996:377033 CAPLUS  
 DOCUMENT NUMBER: 125:58103  
 TITLE: Preparation of alkylbenzoic acids  
 INVENTOR(S): Huesler, Rinaldo; Orban, Ivan; Holer, Martin  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 706987	A1	19960417	EP 1995-810627	19951004
EP 706987	B1	19980603		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
ES 2119345	T3	19981001	ES 1995-810627	19951004

CA 2160307	AA 19960414	CA 1995-2160307	19951011
US 5616787	A 19970401	US 1995-541006	19951011
BR 9504365	A 19970408	BR 1995-4365	19951011
CN 1129211	A 19960821	CN 1995-117291	19951012
CN 1102924	B 20030312		
JP 08268958	A2 19961015	JP 1995-291711	19951013
PRIORITY APPLN. INFO.:		CH 1994-3078	A 19941013
OTHER SOURCE(S):	CASREACT 125:58103; MARPAT 125:58103		
GI			

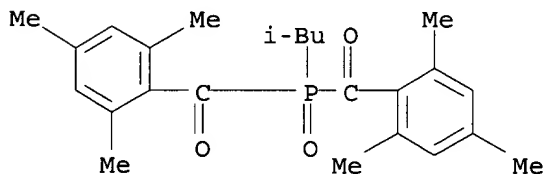


AB Title compds. [I; R = CO<sub>2</sub>H; 2 of R<sub>1</sub>-R<sub>5</sub> = (cyclo)alkyl and the others = H or halo] were prepd. by carboxylation of I (R = H) with CO<sub>2</sub> in the presence of a Friedel-Crafts catalyst at .ltoreq.10bar and -20.degree. to 40.degree..

IT 151249-76-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of alkylbenzoic acids)

RN 151249-76-2 CAPLUS

CN Phosphine oxide, (2-methylpropyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:365826 CAPLUS

DOCUMENT NUMBER: 125:99768

TITLE: Reaction Mechanism of Monoacyl- and Bisacylphosphine Oxide Photoinitiators Studied by <sup>31</sup>P-, <sup>13</sup>C-, and <sup>1</sup>H-CIDNP and ESR

AUTHOR(S): Kolczak, Urszula; Rist, Guenther; Dietliker, Kurt; Wirz, Jakob

CORPORATE SOURCE: Physics Department, Ciba-Geigy Ltd., Basel, CH-4001, Switz.

SOURCE: Journal of the American Chemical Society (1996), 118(27), 6477-6489  
 CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

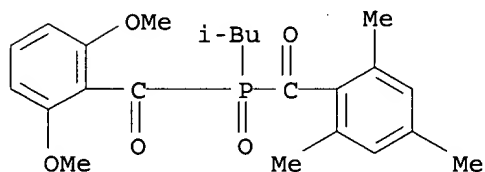
DOCUMENT TYPE: Journal

LANGUAGE: English

AB <sup>31</sup>P-NMR-CIDNP (CIDNP = chem. induced dynamic nuclear polarization) spectroscopy was applied for the first time to investigate the formation and reaction of phosphorus-centered radicals obtained from

phosphorus-contg. photoinitiators. <sup>13</sup>C-NMR- and <sup>1</sup>H-NMR-CIDNP and ESR spectroscopies were used as complementary exptl. techniques for the elucidation of the photochem. of these compds. The large hyperfine coupling consts. of the <sup>31</sup>P-nucleus results in a violation of Kaptein's rules, which is the only observation of this kind in <sup>13</sup>C-NMR-CIDNP spectra reported so far. Interpretation of the CIDNP spectra, using a modification of Kaptein's rules for the <sup>13</sup>C-NMR- and <sup>1</sup>H-NMR-CIDNP, consistently shows that all compds. investigated undergo a photoinduced cleavage of the carbonyl-phosphinoyl bond from a triplet state. The fate of the primary radicals is discussed, and it is unambiguously shown by trapping expts. that the novel bisacylphosphine oxide photoinitiators give four radicals in a stepwise process.

IT 178817-17-9P, (2,6-Dimethoxybenzoyl) (2,4,6-trimethylbenzoyl) (2-methylpropyl)phosphine oxide  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
 (31P-NMR-CIDNP in study of phosphorus-centered radicals in photolysis of phosphine oxide derived photoinitiators)  
 RN 178817-17-9 CAPLUS  
 CN Phosphine oxide, (2,6-dimethoxybenzoyl) (2-methylpropyl) (2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1996:346073 CAPLUS  
 DOCUMENT NUMBER: 125:11716  
 TITLE: Manufacture of novel acylphosphine oxides as photopolymerization initiators  
 INVENTOR(S): Leppard, David George; Koehler, Manfred; Hug, Gebhard  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: PCT Int. Appl., 36 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

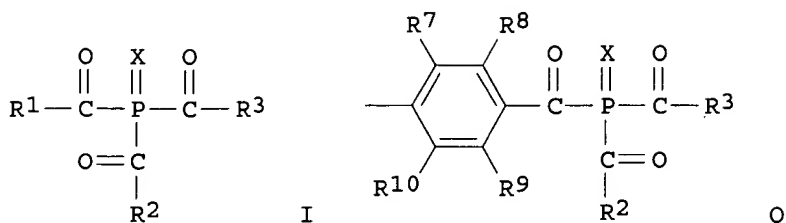
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9607662	A1	19960314	WO 1995-EP3392	19950829
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2197787	AA	19960314	CA 1995-2197787	19950829
AU 9534739	A1	19960327	AU 1995-34739	19950829
AU 682793	B2	19971016		
EP 779891	A1	19970625	EP 1995-931217	19950829
EP 779891	B1	19981223		
R: BE, DE, DK, ES, FR, GB, IT, NL, SE				
JP 10505352	T2	19980526	JP 1995-509169	19950829

ZA 9507514  
US 5721292  
PRIORITY APPLN. INFO.:

A 19960328  
A 19980224

ZA 1995-7514 19950907  
US 1997-793269 19970305  
CH 1994-2750 19940908  
WO 1995-EP3392 19950829

GI



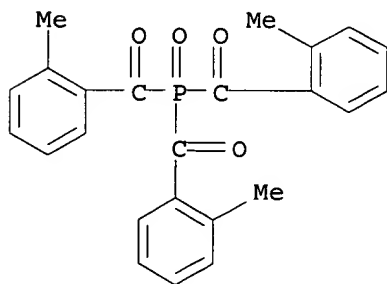
AB The title compds. [I; X = O, S; R1-R3 = CR4R5R6, C2-8 alkenyl, (un)substituted Ph, (un)substituted naphthyl, (un)substituted biphenyl, O-, S-, N-contg. 5- or 6-membered heterocyclic ring; R1 can also be triacylphosphine oxide moiety Q; R1R2 = (un)substituted C4-10 ring; R4-R6 = H, C1-18 alkyl, etc.; R7-R10 = H, halo, C1-4 alkyl, C1-4 alkoxy] are suitable as initiators for photopolymerization of ethylenically unsaturated systems, esp. in white paint formulations. Thus, a paint comprising Ebecryl-830 67.5, hexanediol diacrylate 5.0, trimethylolpropane triacrylate 2.5, TiO2 25.0 parts and 2% (2-MeC6H4CO)3PO [prepn. from (Me3Si)3P, 2-MeC6H4COCl, and H2O2 given] was applied on a chipboard and UV-cured to give a sample with smear-proof surface.

IT 177481-27-5P 177481-28-6P 177481-29-7P  
177481-30-0P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(manuf. of novel acylphosphine oxides as photopolymerization initiators)

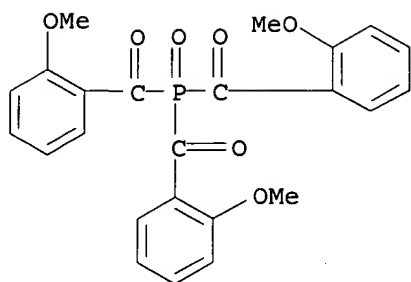
RN 177481-27-5 CAPLUS

CN Phosphine oxide, tris(2-methylbenzoyl)- (9CI) (CA INDEX NAME)



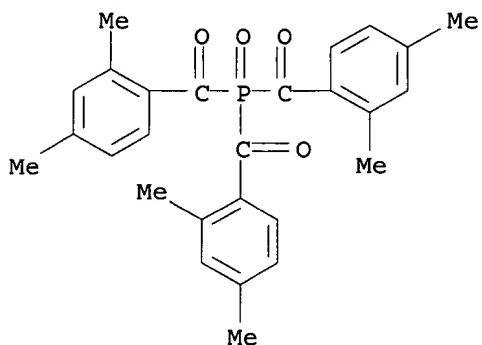
RN 177481-28-6 CAPLUS

CN Phosphine oxide, tris(2-methoxybenzoyl)- (9CI) (CA INDEX NAME)



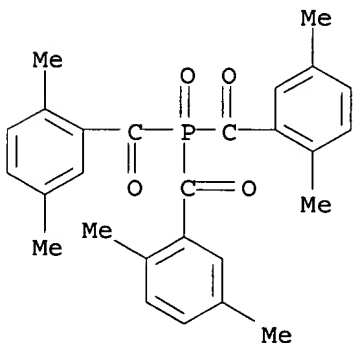
RN 177481-29-7 CAPLUS

CN Phosphine oxide, tris(2,4-dimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 177481-30-0 CAPLUS

CN Phosphine oxide, tris(2,5-dimethylbenzoyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:284413 CAPLUS

DOCUMENT NUMBER: 124:319750

TITLE: Alkoxyphenyl-substituted bisacylphosphine oxides for initiators for photocuring ethylenically unsaturated polymers

INVENTOR(S): Leppard, David George; Koehler, Manfred

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Ger. Offen., 37 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19532358	A1	19960307	DE 1995-19532358	19950901
TW 381106	B	20000201	TW 1995-84108485	19950815
AU 9530286	A1	19960509	AU 1995-30286	19950825
AU 700479	B2	19990107		
US 5965776	A	19991012	US 1995-519225	19950825
BE 1010179	A4	19980203	BE 1995-723	19950830
CA 2157342	AA	19960303	CA 1995-2157342	19950831
SE 9503022	A	19960303	SE 1995-3022	19950901
SE 510489	C2	19990531		
NL 1001124	A1	19960304	NL 1995-1001124	19950901
NL 1001124	C2	19970513		
GB 2292740	A1	19960306	GB 1995-17849	19950901
GB 2292740	B2	19981230		
FR 2724172	A1	19960308	FR 1995-10312	19950901
FR 2724172	B1	19980123		
JP 08081481	A2	19960326	JP 1995-248497	19950901
CN 1130632	A	19960911	CN 1995-116811	19950901
BR 9503915	A	19960917	BR 1995-3915	19950901
CH 689774	A	19991029	CH 1995-2497	19950901
ZA 9507404	A	19960417	ZA 1995-7404	19950904
AT 9501471	A	19960815	AT 1995-1471	19950904
AT 402298	B	19970325		
US 5767169	A	19980616	US 1996-601595	19960214
PRIORITY APPLN. INFO.:			CH 1994-2691	A 19940902
			US 1995-519225	A3 19950825

OTHER SOURCE(S): MARPAT 124:319750

AB Title oxides are stable to storage and hydrolysis and are useful in crosslinking coatings, inks, printing plates, and resists. A typical oxide was manufd. by reaction of lithium diisopropylamide with 2,4-dibutoxyphenylphosphine and 2,4,6-trimethylbenzoyl chloride at -40 to -30.degree., and oxidn. of the intermediate.

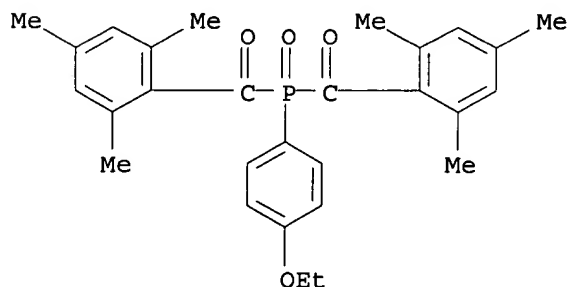
IT 176251-25-5P 176251-26-6P 176251-27-7P  
176251-28-8P 176251-29-9P 176251-30-2P  
176251-31-3P 176251-32-4P 176251-33-5P  
176251-34-6P 176251-35-7P 176251-36-8P  
176251-37-9P 176251-38-0P 176251-39-1P  
176251-40-4P 176251-41-5P 176251-42-6P  
176251-43-7P 176251-44-8P 176251-45-9P  
176251-46-0P 176251-47-1P

RL: CAT (Catalyst use); IMF (Industrial manufacture); **PREP**  
(Preparation); USES (Uses)

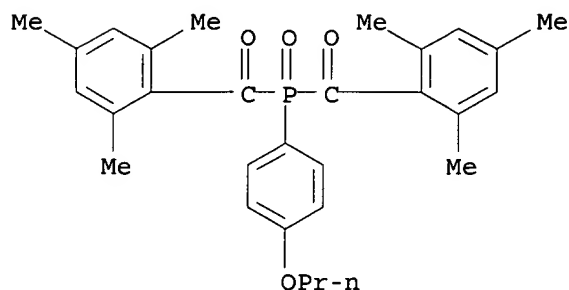
(alkoxyphenyl-substituted bisacylphosphine oxides for initiators for photocuring ethylenically unsatd. polymers)

RN 176251-25-5 CAPLUS

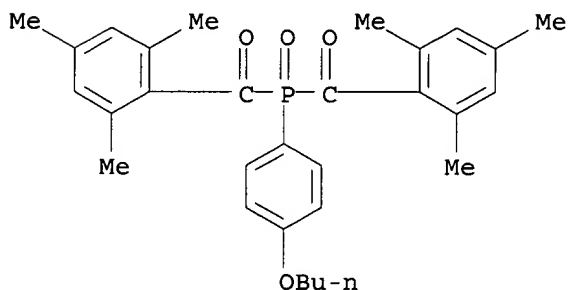
CN Phosphine oxide, (4-ethoxyphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



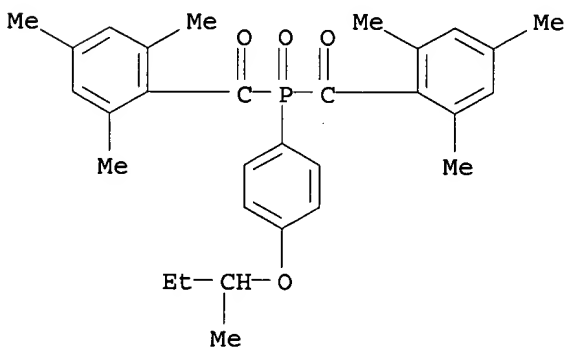
RN 176251-26-6 CAPLUS  
 CN Phosphine oxide, (4-propoxyphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 176251-27-7 CAPLUS  
 CN Phosphine oxide, (4-butoxyphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)

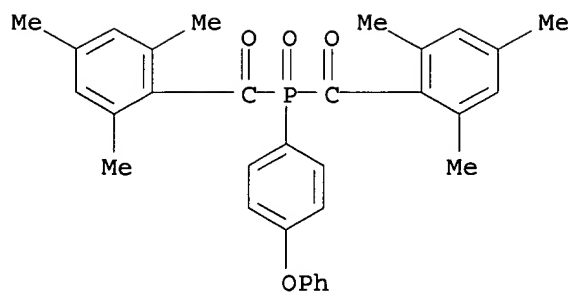


RN 176251-28-8 CAPLUS  
 CN Phosphine oxide, [4-(1-methylpropoxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)

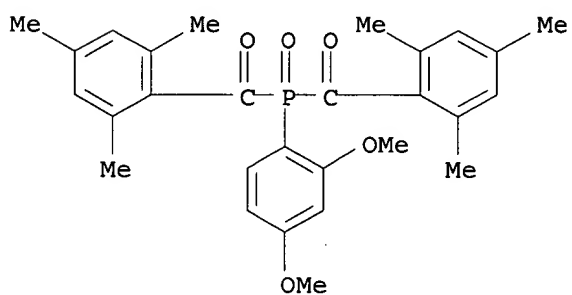


RN 176251-29-9 CAPLUS  
 CN Phosphine oxide, (4-phenoxyphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)

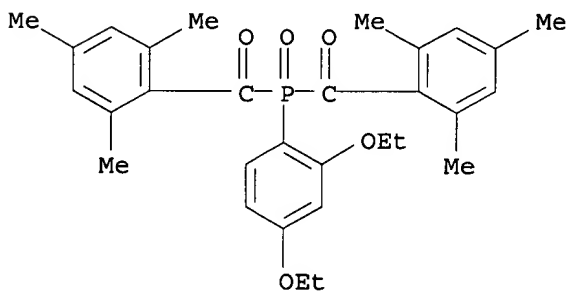




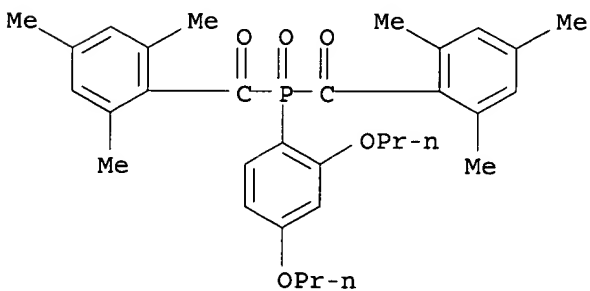
RN 176251-30-2 CAPLUS  
 CN Phosphine oxide, (2,4-dimethoxyphenyl)bis(2,4,6-trimethylbenzoyl) - (9CI)  
 (CA INDEX NAME)

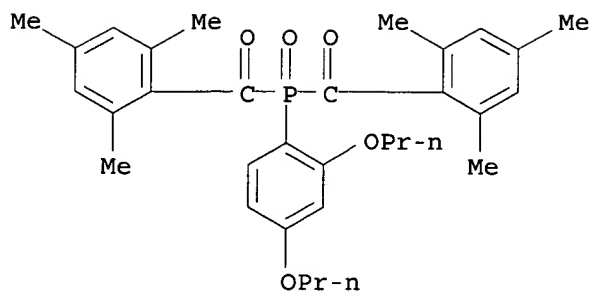


RN 176251-31-3 CAPLUS  
 CN Phosphine oxide, (2,4-diethoxyphenyl)bis(2,4,6-trimethylbenzoyl) - (9CI)  
 (CA INDEX NAME)



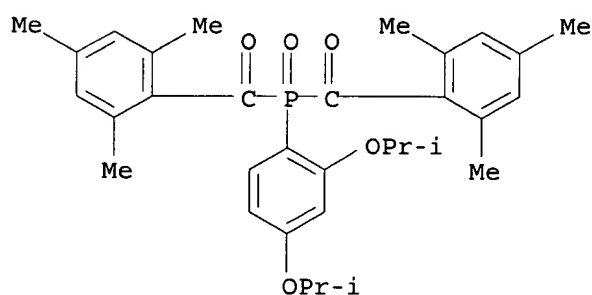
RN 176251-32-4 CAPLUS  
 CN Phosphine oxide, (2,4-dipropoxyphenyl)bis(2,4,6-trimethylbenzoyl) - (9CI)  
 (CA INDEX NAME)





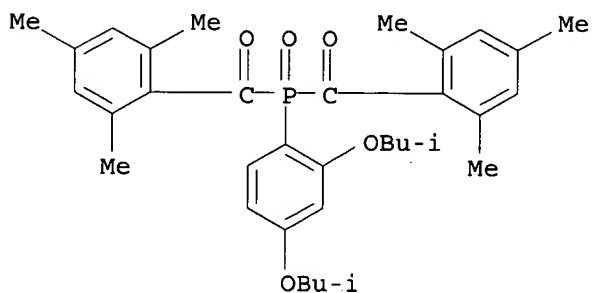
RN 176251-33-5 CAPLUS

CN Phosphine oxide, [2,4-bis(1-methylethoxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



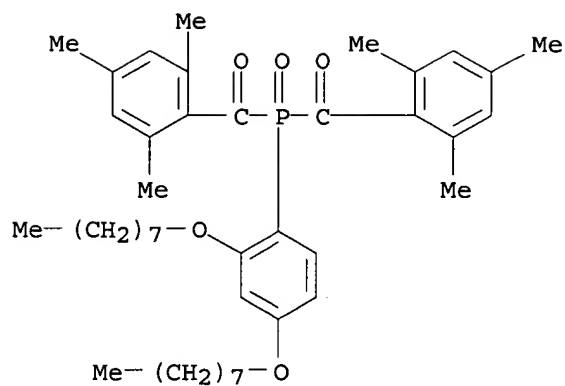
RN 176251-34-6 CAPLUS

CN Phosphine oxide, [2,4-bis(2-methylpropoxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



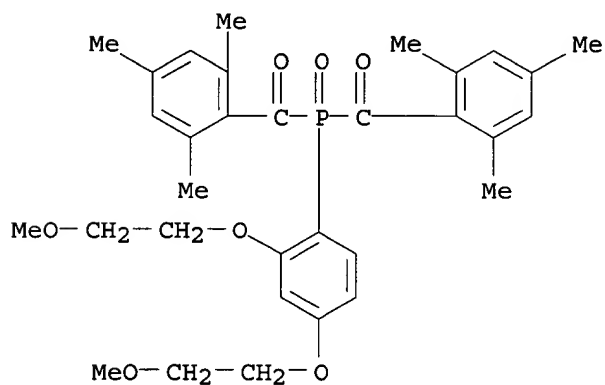
RN 176251-35-7 CAPLUS

CN Phosphine oxide, [2,4-bis(octyloxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



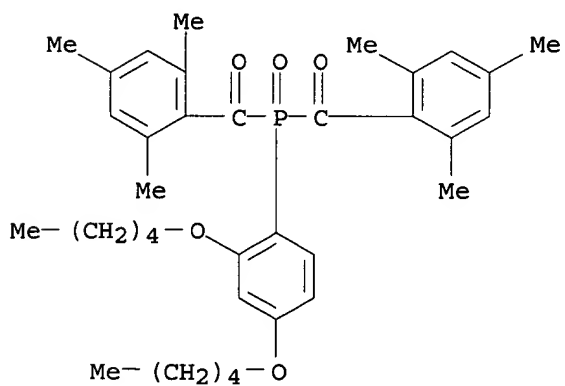
RN 176251-36-8 CAPLUS

CN Phosphine oxide, [2,4-bis(2-methoxyethoxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



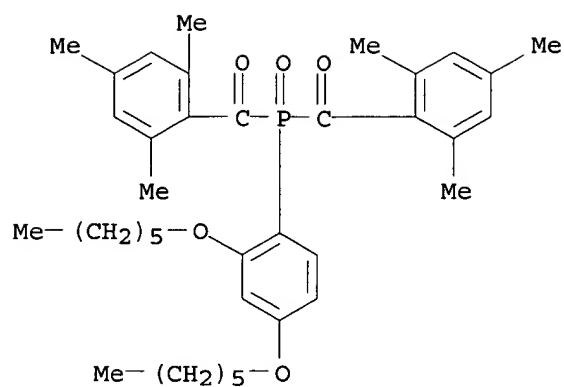
RN 176251-37-9 CAPLUS

CN Phosphine oxide, [2,4-bis(pentyloxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



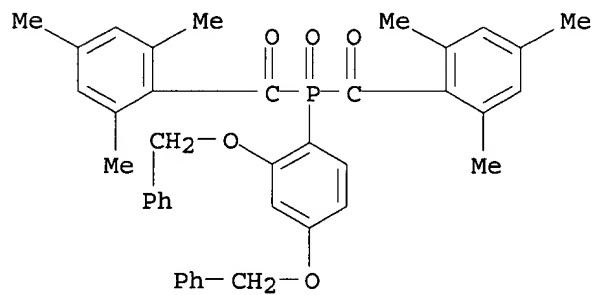
RN 176251-38-0 CAPLUS

CN Phosphine oxide, [2,4-bis(hexyloxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



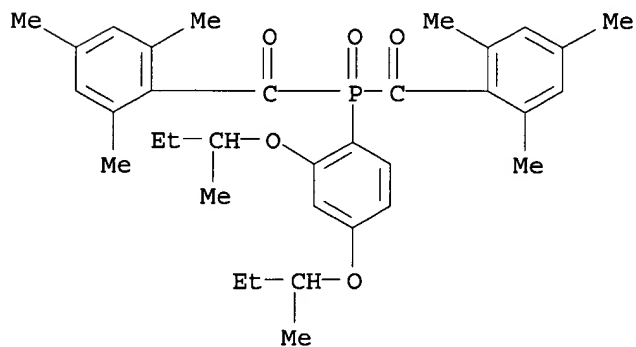
RN 176251-39-1 CAPLUS

CN Phosphine oxide, [2,4-bis(phenylmethoxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



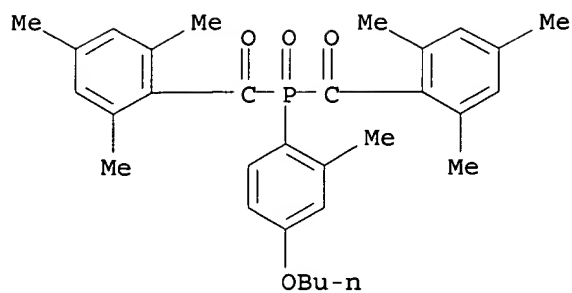
RN 176251-40-4 CAPLUS

CN Phosphine oxide, [2,4-bis(1-methylpropoxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



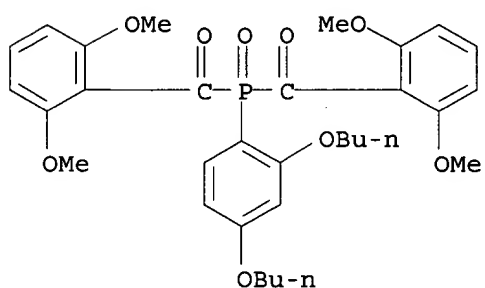
RN 176251-41-5 CAPLUS

CN Phosphine oxide, (4-butoxy-2-methylphenyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



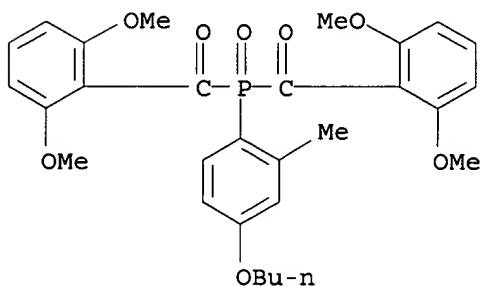
RN 176251-42-6 CAPLUS

CN Phosphine oxide, (2,4-dibutoxyphenyl)bis(2,6-dimethoxybenzoyl) - (9CI) (CA INDEX NAME)



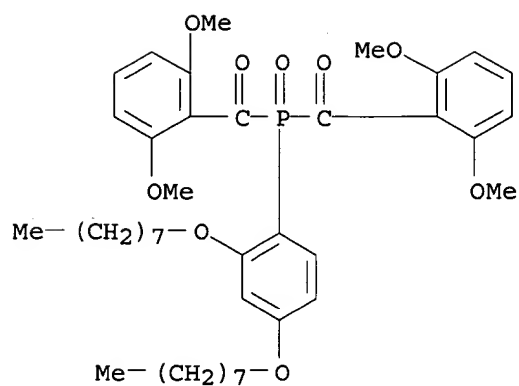
RN 176251-43-7 CAPLUS

CN Phosphine oxide, (4-butoxy-2-methylphenyl)bis(2,6-dimethoxybenzoyl) - (9CI) (CA INDEX NAME)



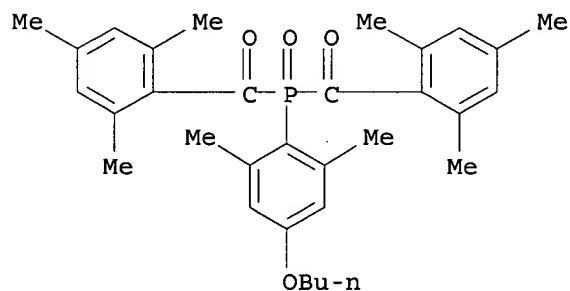
RN 176251-44-8 CAPLUS

CN Phosphine oxide, [2,4-bis(octyloxy)phenyl]bis(2,6-dimethoxybenzoyl) - (9CI) (CA INDEX NAME)



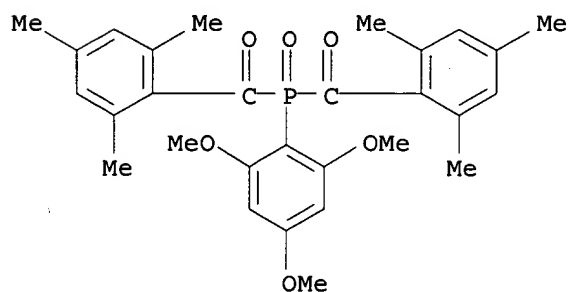
RN 176251-45-9 CAPLUS

CN Phosphine oxide, (4-butoxy-2,6-dimethylphenyl)bis(2,4,6-trimethoxybenzoyl) - (9CI) (CA INDEX NAME)



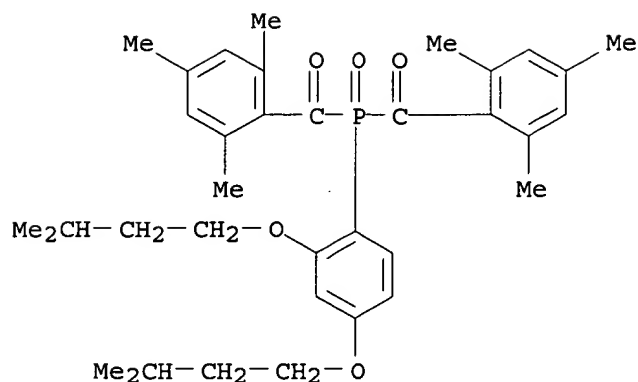
RN 176251-46-0 CAPLUS

CN Phosphine oxide, (2,4,6-trimethoxyphenyl)bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



RN 176251-47-1 CAPLUS

CN Phosphine oxide, [2,4-bis(3-methylbutoxy)phenyl]bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



L14 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1995:963518 CAPLUS

DOCUMENT NUMBER: 123:341295

TITLE: Preparation of dimeric bisacylphosphines and bisacylphosphine oxides as photoinitiators

INVENTOR(S): Leppard, David G.; Koehler, Manfred

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 38 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

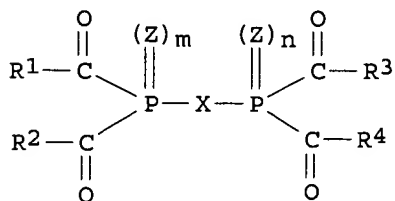
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 670323	A1	19950906	EP 1995-810102	19950217
EP 670323	B1	20000628		
R: BE, DE, ES, FR, GB, IT, NL				
ES 2148463	T3	20001016	ES 1995-810102	19950217
CA 2143571	AA	19950903	CA 1995-2143571	19950228
JP 07278215	A2	19951024	JP 1995-68625	19950302
US 5723512	A	19980303	US 1996-669807	19960627
PRIORITY APPLN. INFO.:			CH 1994-614	A 19940302
			US 1995-392563	B1 19950223

OTHER SOURCE(S): MARPAT 123:341295

GI



I

AB The title compds. [I; R1-R4 = C1-20 alkyl, cycloalkyl, C2-8 alkenyl, (un)substituted Ph, (un)substituted naphthyl, (un)substituted biphenyl; R1-R4 can form an (un)substituted 5- or 6-membered heterocyclic ring with O, S, or N, etc.; R6 = C1-4 alkyl, Ph; X = alkylene (un)interrupted with .gtoreq.1 heteroatom or group, alkenylene, (un)substituted phenylene, (decahydro)naphthylene, etc.] were prepd. by acylation of phosphines

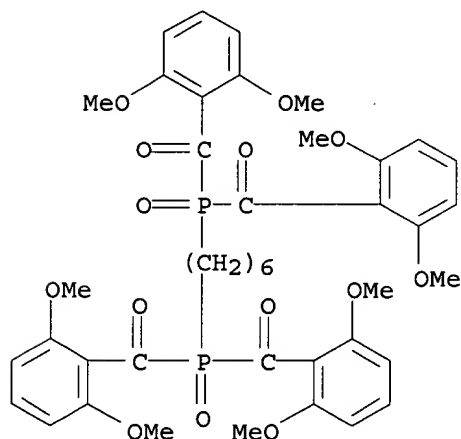
H2PXP2 (X as defined) with acyl chlorides followed by oxidn. or conversion to phosphine sulfides (no data for the latter reaction). For example, 2% 1,10-bis[bis(2,4,6-trimethylbenzoyl)phosphine oxide]decane (prepn. by benzoylation of decamethylenebisphosphine with 2,4,6-Me3C6H2COCl followed by oxidn. with H2O2 given) was added to an UV-curable pigmented coating obtained by blending polyester acrylate oligomer (Ebecryl 830) 67.5, hexanediol diacrylate 5.0, trimethylolpropane triacrylate 2.5, and TiO2 25.0 parts, the blend was coated on an Al substrate and cured with 2 passes at 10 m/min under an 80-W/cm Hg lamp to give a wiping resistant coating with pendulum hardness 113 immediately and 163 after 15-min postcuring.

IT 171056-53-4P 171056-54-5P 171056-55-6P  
171056-56-7P 171056-57-8P 171056-58-9P  
171056-59-0P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of dimeric bisacylphosphines and bisacylphosphine oxides as photoinitiators)

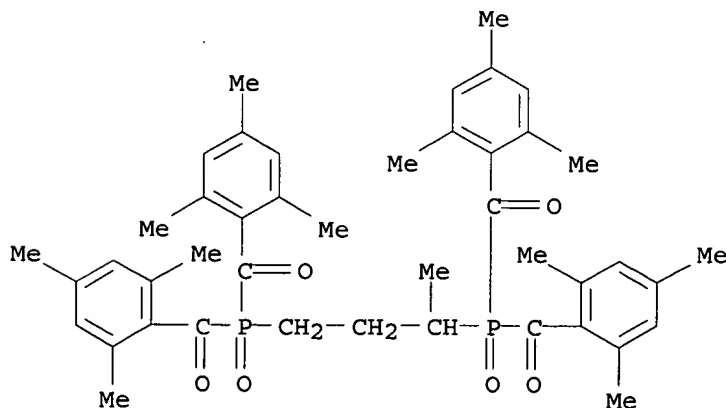
RN 171056-53-4 CAPLUS

CN Phosphine oxide, 1,6-hexanediylbis[bis(2,6-dimethoxybenzoyl)- (9CI) . (CA INDEX NAME)



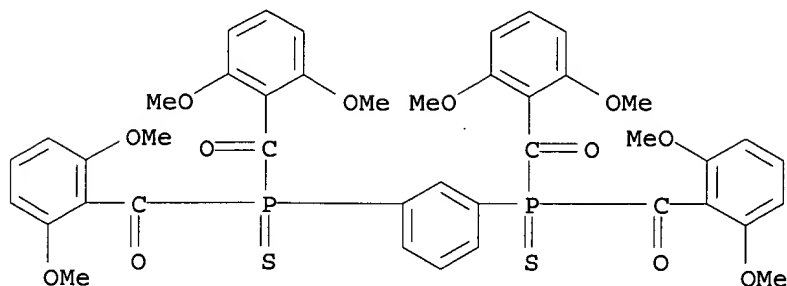
RN 171056-54-5 CAPLUS

CN Phosphine oxide, (1-methyl-1,3-propanediyl)bis[bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)

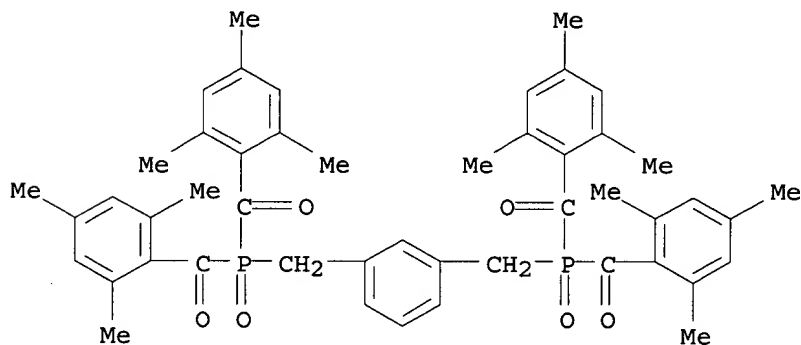




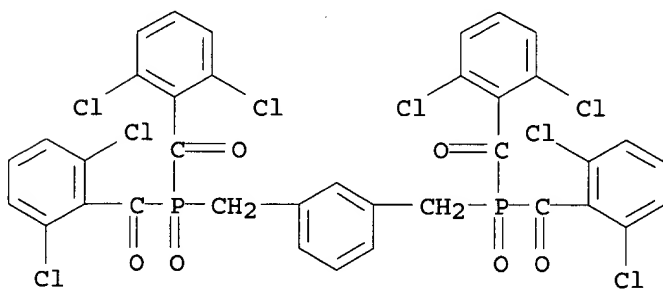
RN 171056-55-6 CAPLUS  
 CN Phosphine sulfide, 1,3-phenylenebis[bis(2,6-dimethoxybenzoyl)- (9CI) (CA INDEX NAME)]



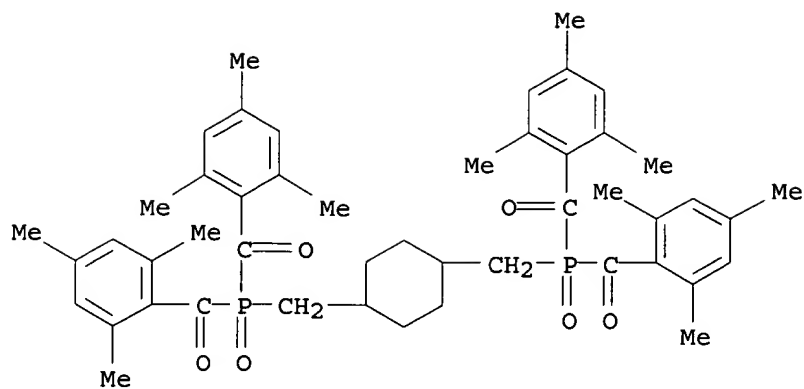
RN 171056-56-7 CAPLUS  
 CN Phosphine oxide, [1,3-phenylenebis(methylene)]bis[bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



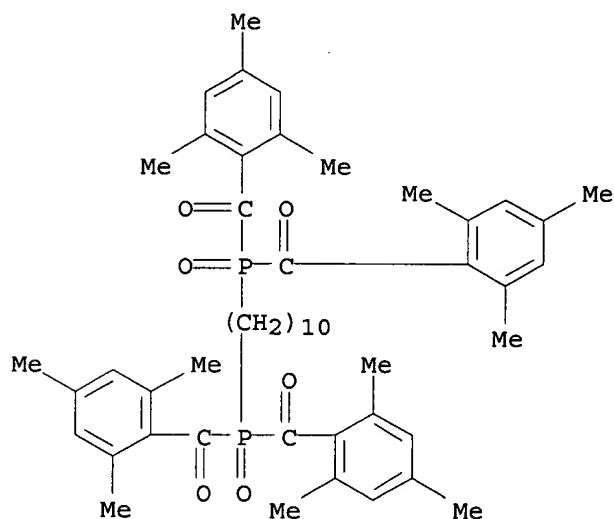
RN 171056-57-8 CAPLUS  
 CN Phosphine oxide, [1,3-phenylenebis(methylene)]bis[bis(2,6-dichlorobenzoyl)- (9CI) (CA INDEX NAME)]



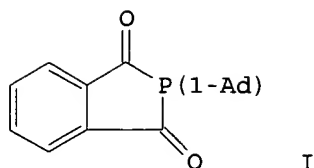
RN 171056-58-9 CAPLUS  
 CN Phosphine oxide, [1,4-cyclohexanediylbis(methylene)]bis[bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



RN 171056-59-0 CAPLUS  
 CN Phosphine oxide, 1,10-decanediylbis[bis(2,4,6-trimethylbenzoyl) - (9CI)  
 (CA INDEX NAME)



L14 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1994:508955 CAPLUS  
 DOCUMENT NUMBER: 121:108955  
 TITLE: Contributions to the chemistry of acylphosphines:  
 1-adamantylacetyl-, di-1-adamantylacetyl- and  
 1-adamantoylphosphines. Preparation and some reactions  
 AUTHOR(S): Goerlich, Jens R.; Mueller, Christian; Schmutzler,  
 Reinhard  
 CORPORATE SOURCE: Inst. Anorg. Anal. Chem., Tech. Univ., Braunschweig,  
 D-38023, Germany  
 SOURCE: Phosphorus, Sulfur and Silicon and the Related  
 Elements (1993), 85(1-4), 193-205  
 CODEN: PSSLEC; ISSN: 1042-6507  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 121:108955  
 GI



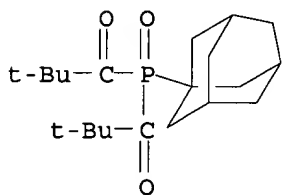
AB Acylphosphines of the type  $(1\text{-Ad})_n\text{P}[\text{C}(\text{:O})\text{R}]_{3-n}$  ( $n = 1, 2$ ;  $\text{R} = \text{CMe}_3, 1\text{-Ad}, \text{Ph}$ ,  $\text{Ad} = \text{adamantyl}$ ) were prepd. via the reaction of  $1\text{-AdPH}_2$  or  $(1\text{-Ad})_2\text{PH}$  with the corresponding carboxylic acid chlorides/ $\text{NET}_3$ . The reaction of  $1\text{-AdPH}_2$  with phthaloyl dichloride/ $\text{NET}_3$  led to the five-membered heterocycle I. In the case of  $n = 1$ ,  $\text{R} = 1\text{-Ad}$  the monosubstitution product  $1\text{-AdP}(\text{H})\text{C}(\text{:O})(1\text{-Ad})$  was also obsd.  $1\text{-AdP}(\text{H})\text{C}(\text{:O})\text{Ph}$  1e was selectively formed when  $1\text{-AdPH}_2$  was allowed to react with  $\text{PhC}(\text{:O})\text{Cl}/\text{K}_2\text{CO}_3$ , whereas the remaining PH-proton in 1e could be substituted by  $\text{C}(\text{:O})\text{CMe}_3$  in its reaction with  $\text{Me}_3\text{CC}(\text{:O})\text{Cl}/\text{NET}_3$  to give  $(1\text{-Ad})\text{P}\{\text{C}(\text{:O})\text{Ph}\}\{\text{C}(\text{:O})\text{CMe}_3\}$ . The action of trifluoroacetic acid anhydride on  $1\text{-AdPH}_2$  or  $(1\text{-Ad})_2\text{PH}$  led to the trifluoroacetyl phosphines. The reaction of  $1\text{-AdP}[\text{C}(\text{:O})\text{CMe}_3]_2$  2a with aq.  $\text{H}_2\text{O}_2$  or elemental sulfur furnished the corresponding chalcogenides, with a large excess of Me iodide  $[1\text{-AdPMe}_3]\text{I}$  was formed. The carbonyl complexes  $(\text{L})\text{M}(\text{CO})_n$  ( $\text{L} = 2\text{a}$ ;  $\text{M} = \text{Ni}$ ,  $n = 3$ ;  $\text{M} = \text{Fe}$ ,  $n = 4$ ) were obtained upon reaction of 2a with  $\text{Ni}(\text{CO})_4$  and  $\text{Fe}_2(\text{CO})_9$ , resp. Tris-1-adamantoylphosphine was formed as a byproduct in the reaction of  $\text{P}(\text{SiMe}_3)_3$  with  $1\text{-AdC}(\text{:O})\text{Cl}$  and was converted to the chalcogenides  $[1\text{-AdC}(\text{:O})]_3\text{P}(\text{:X})$  ( $\text{X} = \text{O}, \text{S}$ ).

IT 156568-62-6P 156568-63-7P 156568-67-1P  
156568-68-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

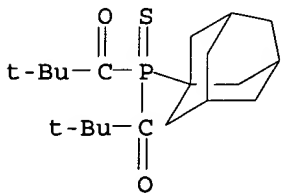
RN 156568-62-6 CAPLUS

CN Phosphine oxide, bis(2,2-dimethyl-1-oxopropyl)tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-  
(9CI) (CA INDEX NAME)



RN 156568-63-7 CAPLUS

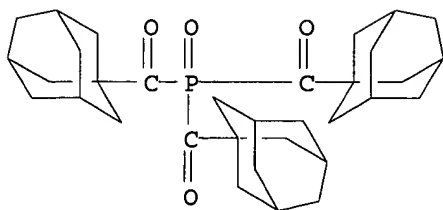
CN Phosphine sulfide, bis(2,2-dimethyl-1-oxopropyl)tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-  
(9CI) (CA INDEX NAME)



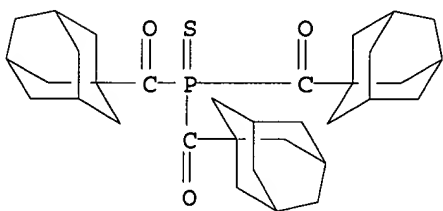
RN 156568-67-1 CAPLUS

CN Phosphine oxide, tris(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylcarbonyl)- (9CI) (CA

INDEX NAME)



RN 156568-68-2 CAPLUS  
CN Phosphine sulfide, tris(tricyclo[3.3.1.3<sup>0</sup>.2<sup>0</sup>.3<sup>0</sup>]dec-1-ylcarbonyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN  
ACCESSION NUMBER: 1994:108034 CAPLUS  
DOCUMENT NUMBER: 120:108034  
TITLE: Mono- and di-acylphosphine oxides  
INVENTOR(S): Rutsch, Werner; Dietliker, Kurt; Hall, Roger G.  
PATENT ASSIGNEE(S): Ciba-Geigy Corp., USA  
SOURCE: U.S., 10 pp. Cont.-in-part of U.S. Ser. No. 559,462, abandoned.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5218009	A	19930608	US 1991-751048	19910828
PRIORITY APPLN. INFO.:			CH 1989-2897	19890804
			US 1990-559462	19900730

OTHER SOURCE(S): MARPAT 120:108034

AB Compds. R<sub>1</sub>R<sub>2</sub>P(O)COR<sub>3</sub> (R<sub>1</sub>-3 = alkyl, cycloalkyl, or R<sub>1</sub> and R<sub>2</sub> together with O form a monocyclic or tricyclic ring) are effective photoinitiators for photopolymerization of unsaturated compounds. Thus, adding 0.161 mol benylphosphine (38% in PhMe) and 49.3 mL NEt<sub>3</sub> to 0.354 mol 2,6-dimethoxybenzoyl chloride in 300 mL PhMe at 100-110.degree. over 30 min, and stirring for 6 h gave 32.9% bis(2,6-dimethoxybenzoyl)benzylphosphine oxide.

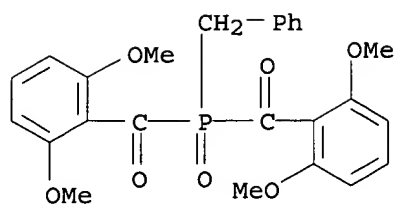
IT 151656-45-0P 151656-46-1P

RL: PREP (Preparation)

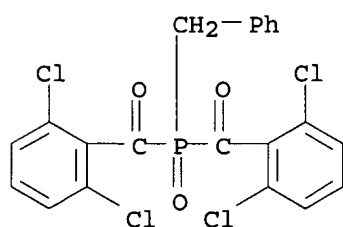
(prepn. of, as catalysts for photochem. polymerization.)

RN 151656-45-0 CAPLUS

CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 151656-46-1 CAPLUS  
 CN Phosphine oxide, bis(2,6-dichlorobenzoyl)(phenylmethyl) - (9CI) (CA INDEX NAME)



L14 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN  
 ACCESSION NUMBER: 1993:652211 CAPLUS  
 DOCUMENT NUMBER: 119:252211  
 TITLE: Alkylbisacylphosphine oxide photoinitiators  
 INVENTOR(S): Leppard, David G.; Koehler, Manfred; Misev, Ljubomir  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Ger. Offen., 18 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4231579	A1	19930325	DE 1992-4231579	19920921
DE 4231579	C2	20021107		
CH 682666	A	19931029	CH 1991-3322	19911114
RU 2091385	C1	19970927	RU 1992-5053215	19920903
GB 2259704	A1	19930324	GB 1992-19402	19920914
GB 2259704	B2	19950517		
SE 9202668	A	19930324	SE 1992-2668	19920916
SE 503060	C2	19960318		
US 5399770	A	19950321	US 1992-947653	19920917
CA 2078722	AA	19930324	CA 1992-2078722	19920921
CA 2078722	C	20030107		
AU 9225251	A1	19930401	AU 1992-25251	19920921
AU 655675	B2	19950105		
ZA 9207226	A	19930323	ZA 1992-7226	19920922
FR 2681599	A1	19930326	FR 1992-11250	19920922
FR 2681599	B1	19950804		
NL 9201641	A	19930416	NL 1992-1641	19920922
NL 194946	B	20030401		
JP 05345790	A2	19931227	JP 1992-278200	19920922
JP 3211039	B2	20010925		
BE 1006011	A4	19940419	BE 1992-823	19920922

ES 2050607	A1	19940516	ES 1992-1889	19920922
ES 2050607	B1	19951116		
AT 9201885	A	19951215	AT 1992-1885	19920922
AT 401265	B	19960725		
SK 281581	B6	20010510	SK 1992-2905	19920922
SK 281582	B6	20010510	SK 1999-1371	19920922
CZ 292028	B6	20030716	CZ 1992-2905	19920922
BR 9203707	A	19930420	BR 1992-3707	19920923
ES 2059261	B1	19951116	ES 1992-1999	19921008
ES 2059261	A1	19941101		
US 5472992	A	19951205	US 1994-234887	19940428
SE 9501365	A	19950412	SE 1995-1365	19950412
SE 509829	C2	19990308		

PRIORITY APPLN. INFO.:

CH 1991-2809	A	19910923
CH 1991-3322	A	19911114
US 1992-947653	A3	19920917

OTHER SOURCE(S): MARPAT 119:252211

AB (R2CO)(R3CO)R1P(O) (I, R1 = C1-18 alkyl, cyclopentyl, or cyclohexyl, R2, R3 = Ph or mono- or polyhalo-, C1-4-alkyl- and(or) C1-4-alkoxy-substituted Ph, with the provision that when R2 and R3 = halo-substituted Ph, R1 .noteq. decyl) are useful as initiators for photocrosslinking/polymg. clear and opaque compns. Thus, a compn. contg. polyester acrylate 67.5, hexanediol diacrylate 5, trimethylolpropane triacrylate 2.5, and TiO2 25 parts was mixed with 0.5% I (R1 = EtMeCH, R2 = R3 = 2,4,6-trimethylphenyl) and applied to particleboards to give white coatings that exhibited pendulum hardness 165, 179, and 185 immediately, 15 min, and 16 h after irradiation with a UV lamp, resp. and yellowness index 1.2 16 h after the irradiation.

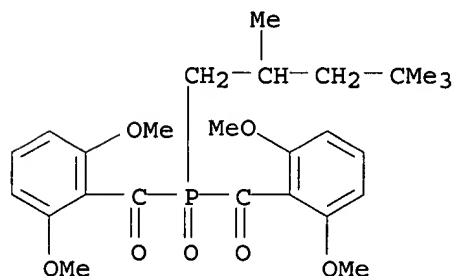
IT 145052-34-2P 151249-76-2P 151249-77-3P  
 151249-78-4P 151249-79-5P 151249-80-8P  
 151249-81-9P 151249-82-0P 151249-83-1P  
 151249-84-2P 151249-85-3P 151249-86-4P  
 151249-87-5P 151249-88-6P 151249-89-7P  
 151249-90-0P 151249-91-1P 151249-92-2P  
 151249-93-3P 151249-94-4P 151249-95-5P  
 151249-96-6P 151249-97-7P 151249-98-8P  
 151249-99-9P 151250-00-9P 151250-01-0P  
 151250-02-1P 151250-03-2P 151250-04-3P  
 151250-05-4P 151250-06-5P 151250-07-6P  
 151250-08-7P 151250-09-8P 151250-10-1P  
 151250-11-2P 151250-12-3P 151250-13-4P

RL: PREP (Preparation)

(manuf. of, for catalysts for photocrosslinking/polymg. opaque and clear compns.)

RN 145052-34-2 CAPLUS

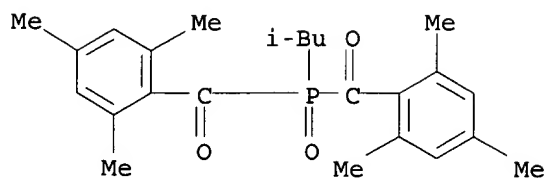
CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)- (9CI)  
 (CA INDEX NAME)



RN 151249-76-2 CAPLUS

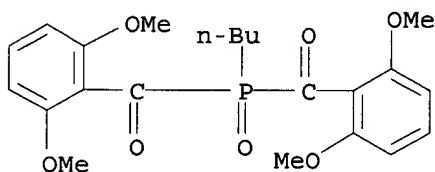
CN Phosphine oxide, (2-methylpropyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA

INDEX NAME)



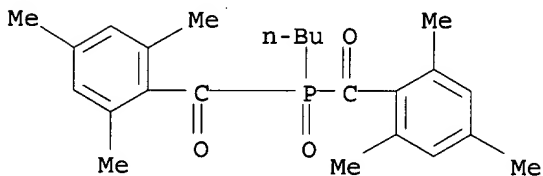
RN 151249-77-3 CAPLUS

CN Phosphine oxide, butylbis(2,6-dimethoxybenzoyl) - (9CI) (CA INDEX NAME)



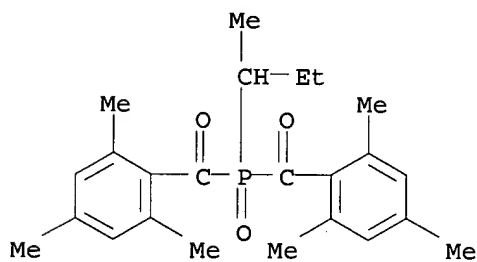
RN 151249-78-4 CAPLUS

CN Phosphine oxide, butylbis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



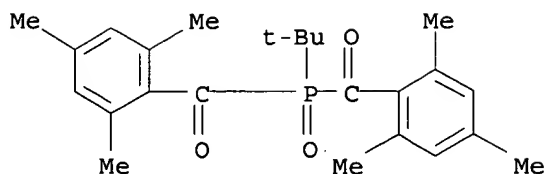
RN 151249-79-5 CAPLUS

CN Phosphine oxide, (1-methylpropyl)bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)

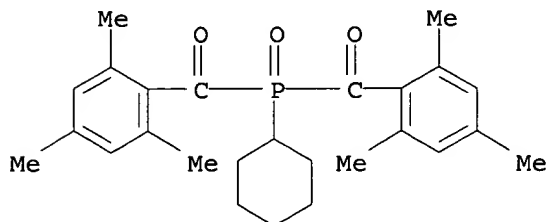


RN 151249-80-8 CAPLUS

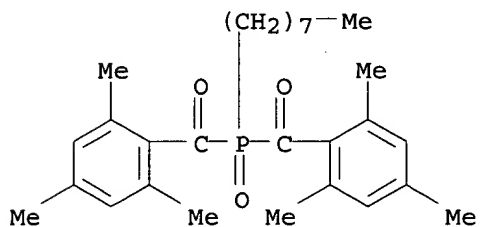
CN Phosphine oxide, (1,1-dimethylethyl)bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



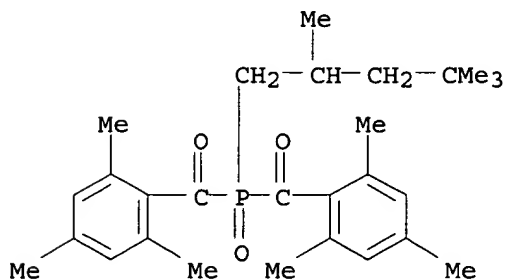
RN 151249-81-9 CAPLUS  
 CN Phosphine oxide, cyclohexylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 151249-82-0 CAPLUS  
 CN Phosphine oxide, octylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)

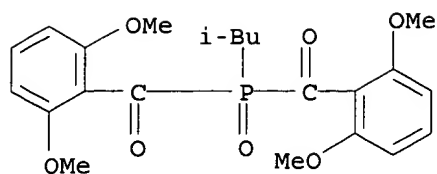


RN 151249-83-1 CAPLUS  
 CN Phosphine oxide, bis(2,4,6-trimethylbenzoyl)(2,4,4-trimethylpentyl)- (9CI) (CA INDEX NAME)

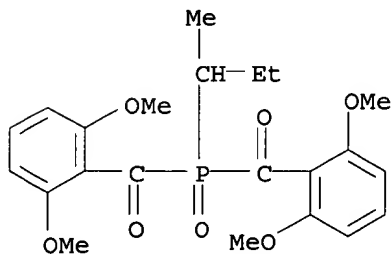


RN 151249-84-2 CAPLUS  
 CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)(2-methylpropyl)- (9CI) (CA INDEX NAME)

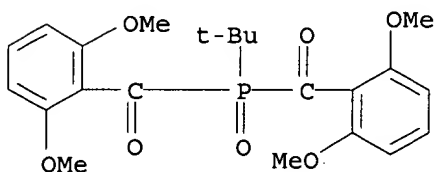




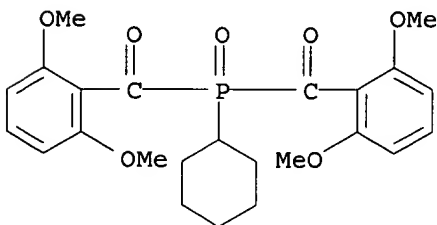
RN 151249-85-3 CAPLUS  
 CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)(1-methylpropyl)- (9CI) (CA INDEX NAME)



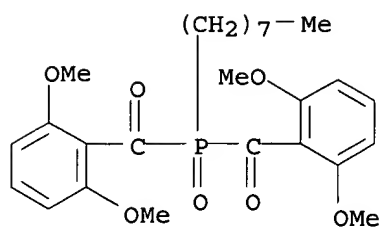
RN 151249-86-4 CAPLUS  
 CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



RN 151249-87-5 CAPLUS  
 CN Phosphine oxide, cyclohexylbis(2,6-dimethoxybenzoyl)- (9CI) (CA INDEX NAME)

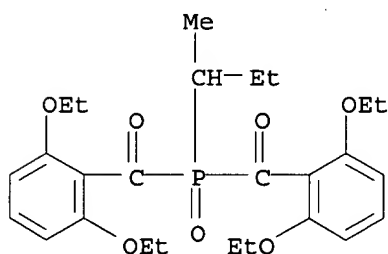


RN 151249-88-6 CAPLUS  
 CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)octyl- (9CI) (CA INDEX NAME)



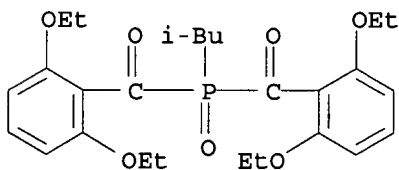
RN 151249-89-7 CAPLUS

CN Phosphine oxide, bis(2,6-diethoxybenzoyl)(1-methylpropyl)- (9CI) (CA INDEX NAME)



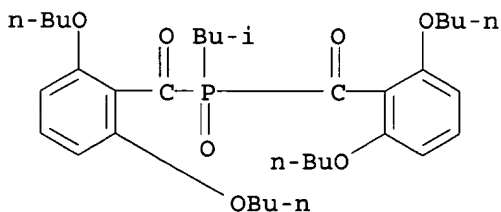
RN 151249-90-0 CAPLUS

CN Phosphine oxide, bis(2,6-diethoxybenzoyl)(2-methylpropyl)- (9CI) (CA INDEX NAME)



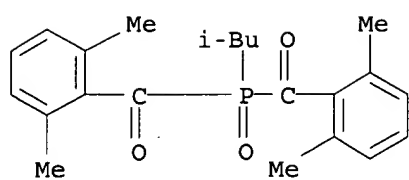
RN 151249-91-1 CAPLUS

CN Phosphine oxide, bis(2,6-dibutoxybenzoyl)(2-methylpropyl)- (9CI) (CA INDEX NAME)



RN 151249-92-2 CAPLUS

CN Phosphine oxide, bis(2,6-dimethylbenzoyl)(2-methylpropyl)- (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1993:40894 CAPLUS  
 DOCUMENT NUMBER: 118:40894  
 TITLE: Bisacylphosphine sulfide polymerization catalysts, photopolymerization therewith, and hardened compositions therefrom  
 INVENTOR(S): Rutsch, Werner; Hug, Gebhard; Koehler, Manfred  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 12 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 495752	A1	19920722	EP 1992-810006	19920107
EP 495752	B1	19950301		
R: BE, DE, FR, GB, IT, NL				
CA 2059144	AA	19920715	CA 1992-2059144	19920110
CA 2059144	C	20020716		
JP 05086080	A2	19930406	JP 1992-24635	19920114
JP 3203431	B2	20010827		
US 5368985	A	19941129	US 1994-203858	19940228
PRIORITY APPLN. INFO.:				
			CH 1991-84	A 19910114
			US 1992-819320	B1 19920109
			US 1992-925239	B1 19920804

OTHER SOURCE(S): MARPAT 118:40894

AB The title catalysts R3COP(:S)(R1)COR2 (I; R1-R3 = optionally substituted hydrocarbyl or 5- or 6-membered heterocycles of S, N, or O; R2 and R3 may be the same) are obtained for use in prodn. of photocured materials. Thus, 0.0935 mol 2,6-dimethoxybenzoyl chloride was condensed with 0.0425 mol iso-BuPH2 to give 62.5% bis(2,6-dimethoxybenzoyl)isobutylphosphine (II). II (0.024 mol) was heated with 0.024 mol S to give 63.9% I (R1 = iso-Bu; R2R3 = 2,6-dimethoxyphenyl) (III). III was used in the UV curing of a coating compn. based on Ebecryl 830 13.5, trimethylolpropane triacrylate 0.5, hexanediol diacrylate 1.0, and TiO2 5.0 parts. Using 1% III, the coating had Koenig pendulum hardness 106, 157, and 181 s after 0, 0.25, and 16 h, resp.

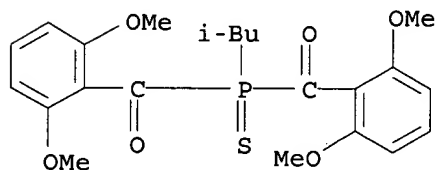
IT 144446-58-2P 144446-59-3P 144446-60-6P

RL: PREP (Preparation)

(prepn. of, as catalysts for UV-curable coating materials)

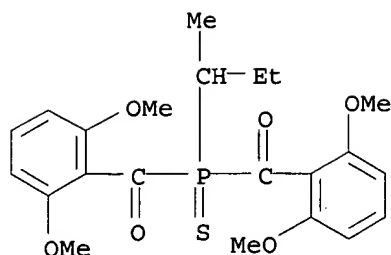
RN 144446-58-2 CAPLUS

CN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)(2-methylpropyl)- (9CI) (CA INDEX NAME)



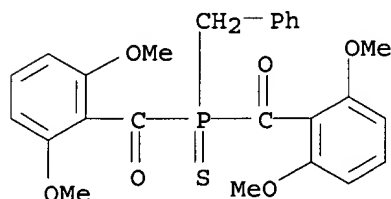
RN 144446-59-3 CAPLUS

CN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)(1-methylpropyl)- (9CI) (CA INDEX NAME)



RN 144446-60-6 CAPLUS

CN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)(phenylmethyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1986:591396 CAPLUS

DOCUMENT NUMBER: 105:191396

TITLE: Bisacylphosphine oxide and its use

INVENTOR(S): Ellrich, Klaus; Herzig, Christian

PATENT ASSIGNEE(S): ESPE Fabrik Pharmazeutischer Praeparate G.m.b.H., Fed. Rep. Ger.

SOURCE: Ger. Offen., 19 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3443221	A1	19860605	DE 1984-3443221	19841127
EP 184095	A2	19860611	EP 1985-114908	19851125
EP 184095	A3	19870422		
EP 184095	B1	19890705		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 61130296	A2	19860618	JP 1985-265962	19851125
JP 05029234	B4	19930428		
US 4737593	A	19880412	US 1985-801339	19851125
AT 44383	E	19890715	AT 1985-114908	19851125
US 4792632	A	19881220	US 1987-121803	19871117
PRIORITY APPLN. INFO.:			DE 1984-3443221	19841127
			EP 1985-114908	19851125
			US 1985-801339	19851125

OTHER SOURCE(S): CASREACT 105:191396

AB R1P(O)(COR2)(COR3) [I; R1 = alkyl, (substituted) cycloalkyl, aryl, 5- or 6-membered heterocycle; R2, R3 = (substituted) cycloalkyl, aryl, 5- or 6-membered heterocycle], useful as photoinitiators for polymn., are prepd. by oxidn. of the corresponding phosphine. Thus, 50 g (2,5-xylyl)P(CO-2,6-Cl2C6H3)2 in MeCN was treated with 150 mL 30% H2O2 at 60.degree. to give 74% I (R1 = 2,5-xylyl; R2 = R3 = 2,6-Cl2C6H3) which showed a higher rate

and lower O inhibition in polymn.-initiation tests vs. a known monoacylphosphine oxide deriv.

IT 104890-00-8P 104890-01-9P 104890-02-0P

104890-03-1P 104890-04-2P 104890-05-3P

104890-06-4P 104890-07-5P 104890-08-6P

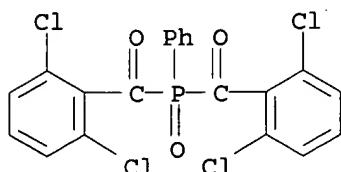
104890-09-7P 104890-10-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of, as polymn. photoinitiator)

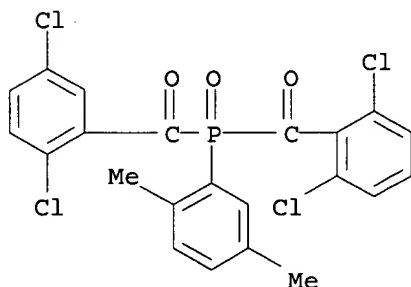
RN 104890-00-8 CAPLUS

CN Phosphine oxide, bis(2,6-dichlorobenzoyl)phenyl- (9CI) (CA INDEX NAME)



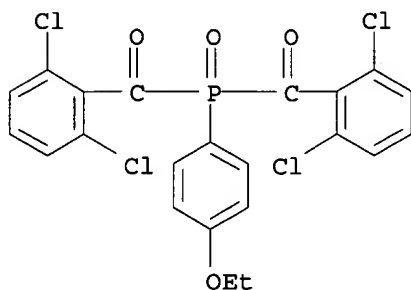
RN 104890-01-9 CAPLUS

CN Phosphine oxide, (2,5-dichlorobenzoyl)(2,6-dichlorobenzoyl)(2,5-dimethylphenyl)- (9CI) (CA INDEX NAME)



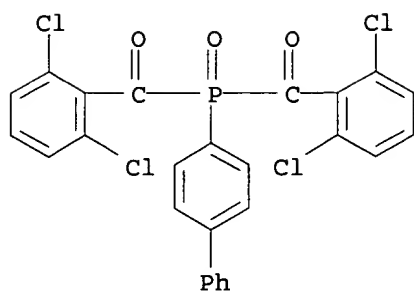
RN 104890-02-0 CAPLUS

CN Phosphine oxide, bis(2,6-dichlorobenzoyl)(4-ethoxyphenyl)- (9CI) (CA INDEX NAME)



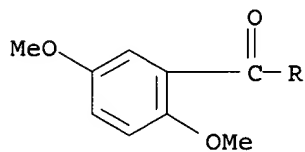
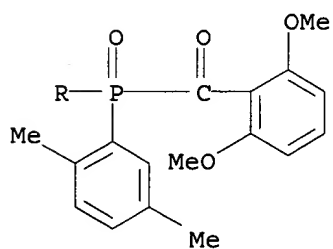
RN 104890-03-1 CAPLUS

CN Phosphine oxide, [1,1'-biphenyl]-4-ylbis(2,6-dichlorobenzoyl)- (9CI) (CA INDEX NAME)



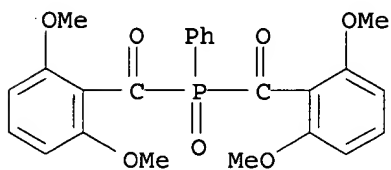
RN 104890-04-2 CAPLUS

CN Phosphine oxide, (2,5-dimethoxybenzoyl)(2,6-dimethoxybenzoyl)(2,5-dimethylphenyl)- (9CI) (CA INDEX NAME)



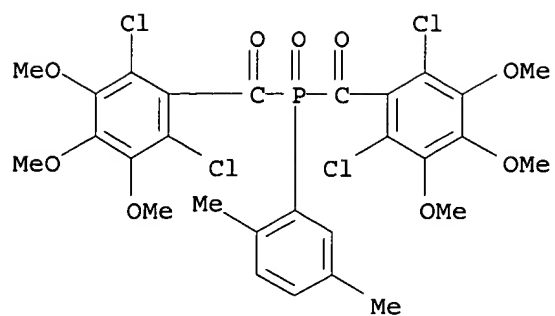
RN 104890-05-3 CAPLUS

CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI) (CA INDEX NAME)

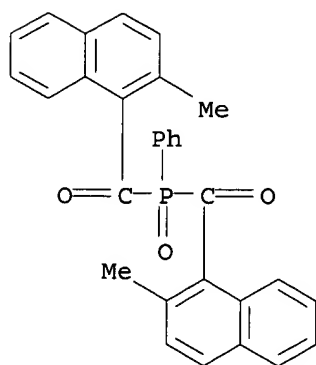


RN 104890-06-4 CAPLUS

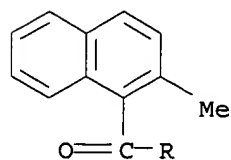
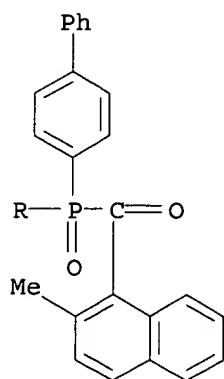
CN Phosphine oxide, bis(2,6-dichloro-3,4,5-trimethoxybenzoyl)(2,5-dimethylphenyl)- (9CI) (CA INDEX NAME)



RN 104890-07-5 CAPLUS  
 CN Phosphine oxide, bis[(2-methyl-1-naphthalenyl)carbonyl]phenyl- (9CI) (CA INDEX NAME)



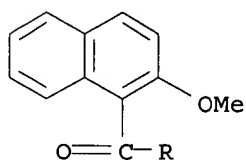
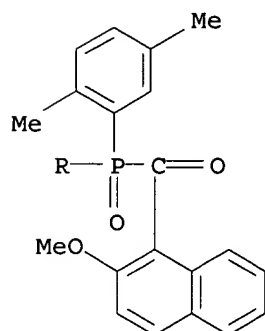
RN 104890-08-6 CAPLUS  
 CN Phosphine oxide, [1,1'-biphenyl]-4-ylbis[(2-methyl-1-naphthalenyl)carbonyl]- (9CI) (CA INDEX NAME)





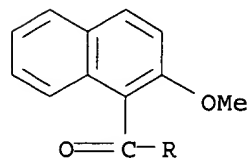
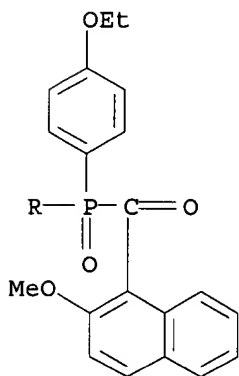
RN 104890-09-7 CAPLUS

CN Phosphine oxide, (2,5-dimethylphenyl)bis[(2-methoxy-1-naphthalenyl)carbonyl] - (9CI) (CA INDEX NAME)



RN 104890-10-0 CAPLUS

CN Phosphine oxide, (4-ethoxyphenyl)bis[(2-methoxy-1-naphthalenyl)carbonyl] - (9CI) (CA INDEX NAME)



TITLE: Reactions of perfluoromonocarboxylic acids. VII. Trifluoroacetoxy, trifluoroacetyl and trifluoromethyl compounds of phosphorus

AUTHOR(S): Sartori, P.; Thomzik, M.

CORPORATE SOURCE: Inst. Anorg. Chem., Tech. Hochsch. Aachen, Aachen, Fed. Rep. Ger.

SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (1972), 394(1-2), 157-70  
CODEN: ZAACAB; ISSN: 0044-2313

DOCUMENT TYPE: Journal

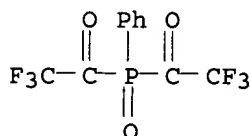
LANGUAGE: German

AB Reaction of F<sub>3</sub>CCO<sub>2</sub>H with RnPCl<sub>3</sub>-n (R = Et, Ph; n = 1, 2) gave the thermally unstable mixed anhydrides RnP(O<sub>2</sub>CCF<sub>3</sub>)<sub>3</sub>-n (I). I were converted during storage at room temp. or controlled temp. increase by rearrangement, condensation, and decarbonylation to give stable [R(CF<sub>3</sub>)P(O)]<sub>2</sub>O and R<sub>2</sub>P(O)OPR<sub>2</sub>(CF<sub>3</sub>)<sub>2</sub>. Intermediate [F<sub>3</sub>CCOP(O)Et]<sub>2</sub>P, PhP(O)(COCF<sub>3</sub>)<sub>2</sub>, and Et<sub>2</sub>P(O)OPET<sub>2</sub>(COCF<sub>3</sub>)<sub>2</sub> were isolated.

IT 40207-54-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 40207-54-3 CAPLUS

CN Phosphine oxide, phenylbis(trifluoroacetyl)- (9CI) (CA INDEX NAME)



=> s 114 and (acid halide or acid chloride or acid fluoride)

3739041 ACID  
1410259 ACIDS  
4200249 ACID  
(ACID OR ACIDS)  
142620 HALIDE  
118036 HALIDES  
206414 HALIDE  
(HALIDE OR HALIDES)  
4745 ACID HALIDE  
(ACID(W) HALIDE)  
3739041 ACID  
1410259 ACIDS  
4200249 ACID  
(ACID OR ACIDS)  
966401 CHLORIDE  
148943 CHLORIDES  
1034228 CHLORIDE  
(CHLORIDE OR CHLORIDES)  
33474 ACID CHLORIDE  
(ACID(W) CHLORIDE)  
3739041 ACID  
1410259 ACIDS  
4200249 ACID  
(ACID OR ACIDS)  
224365 FLUORIDE  
42477 FLUORIDES  
239191 FLUORIDE  
(FLUORIDE OR FLUORIDES)  
1500 ACID FLUORIDE

## (ACID(W) FLUORIDE)

L15 2 L14 AND (ACID HALIDE OR ACID CHLORIDE OR ACID FLUORIDE)

=&gt; d ibib abs hitstr 1-2

L15 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:384210 CAPLUS  
 DOCUMENT NUMBER: 133:4802  
 TITLE: Process for preparing acylphosphines and derivatives  
 INVENTOR(S): Leppard, David George; Eichenberger, Eugen; Kaeser, Rene; Hug, Gebhard; Schwendimann, Urs  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 30 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000032612	A1	20000608	WO 1999-EP8968	19991120
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1135399	A1	20010926	EP 1999-973034	19991120
EP 1135399	B1	20020807		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 221893	E	20020815	AT 1999-973034	19991120
JP 2002531460	T2	20020924	JP 2000-585253	19991120
ES 2180347	T3	20030201	ES 1999-973034	19991120
AU 760237	B2	20030508	AU 2000-13845	19991120
TW 492972	B	20020701	TW 1999-88120769	19991129
PRIORITY APPLN. INFO.:			CH 1998-2376	A 19981130
			CH 1998-2434	A 19981208
			WO 1999-EP8968	W 19991120

OTHER SOURCE(S): MARPAT 133:4802

AB A description is given of processes for the prepn. of mono- and bisacylphosphines and of mono- and bisacylphosphine oxides and mono- and bisacylphosphine sulfides, which comprises 1st reacting org. P-monohalophosphines or P,P-dihalophosphines, or mixts. thereof, with an alkali metal or Mg in combination with Li, where appropriate in the presence of a catalyst, and then carrying out the reaction with **acid halides** and, in the case of the process for the prepn. of oxides, carrying out an oxidn. step and, in the case of the prepn. of sulfides, reacting the phosphines so obtained with S. It is characteristic, inter alia, that the processes are carried out without isolation of the intermediates. E.g.,  $\text{PhPCl}_2$  was lithiated and treated with 2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>COCl followed by oxidn. with H<sub>2</sub>O<sub>2</sub> to give 85% (2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CO)2P(O)Ph. Among the approx. 20 compds. similarly prepd. were 89% (2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CO)2P(S)Ph and 68% 2,6-(MeO)2C<sub>6</sub>H<sub>3</sub>COP(O)Ph<sub>2</sub>.

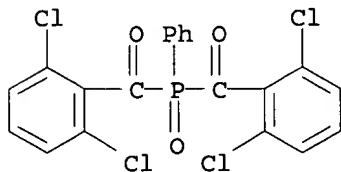
IT 104890-00-8P, Bis(2,6-dichlorobenzoyl)phenylphosphine oxide  
 104890-05-3P, Bis(2,6-dimethoxybenzoyl)phenylphosphine oxide  
 151249-76-2P, Bis(2,4,6-trimethylbenzoyl)isobutylphosphine oxide  
 151249-80-8P 151249-82-0P, Bis(2,4,6-trimethylbenzoyl)octylphosphine oxide 162881-26-7P,  
 Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide 176251-37-9P,

Bis(2,4,6-trimethylbenzoyl)(2,4-dipentoxyphenyl)phosphine oxide  
**270586-71-5P**, Bis(2,4,6-trimethylbenzoyl)phenylphosphine sulfide  
**270586-72-6P**, Bis(2,6-dimethoxybenzoyl)phenylphosphine sulfide  
**270586-73-7P** **270586-74-8P**, Bis(2,4,6-trimethylbenzoyl)ethylphosphine oxide **270586-75-9P**,  
 Bis(2,4,6-trimethylbenzoyl)(2-ethylhexyl)phosphine oxide  
**270586-76-0P**, Bis(2,4,6-trimethylbenzoyl)(propen-1-yl)phosphine  
 oxide

RL: SPN (Synthetic preparation); **PREP (Preparation)**  
 (prepn. of acylphosphines)

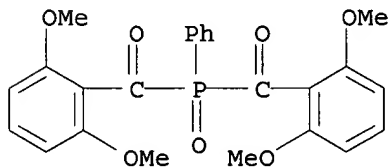
RN 104890-00-8 CAPLUS

CN Phosphine oxide, bis(2,6-dichlorobenzoyl)phenyl- (9CI) (CA INDEX NAME)



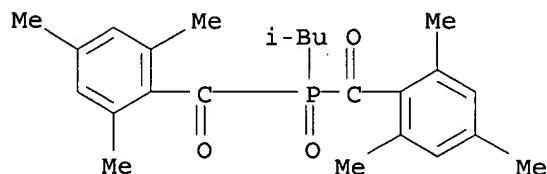
RN 104890-05-3 CAPLUS

CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI) (CA INDEX NAME)



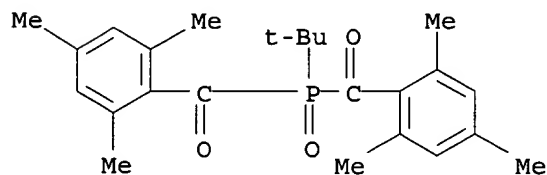
RN 151249-76-2 CAPLUS

CN Phosphine oxide, (2-methylpropyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)

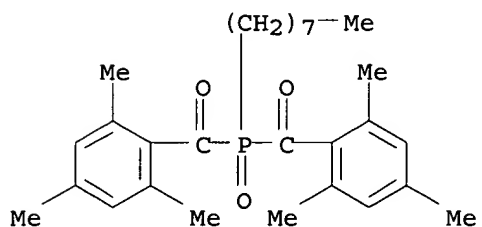


RN 151249-80-8 CAPLUS

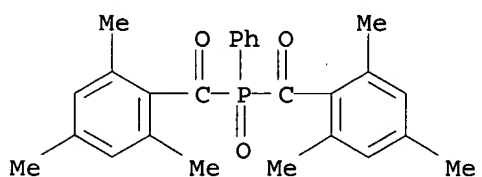
CN Phosphine oxide, (1,1-dimethylethyl)bis(2,4,6-trimethylbenzoyl)- (9CI)  
 (CA INDEX NAME)



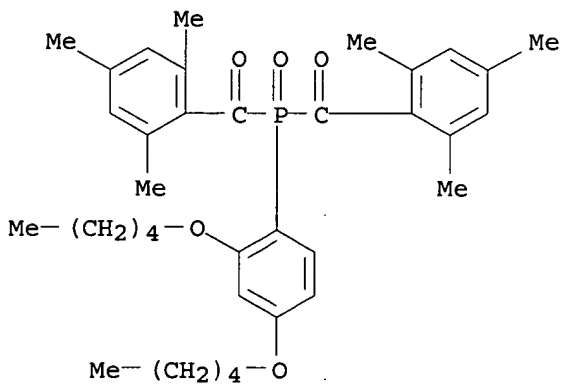
RN 151249-82-0 CAPLUS  
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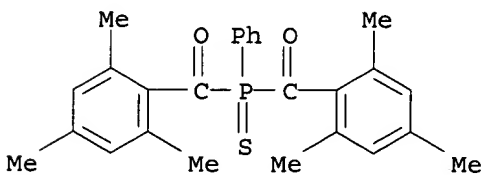
RN 162881-26-7 CAPLUS  
 CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



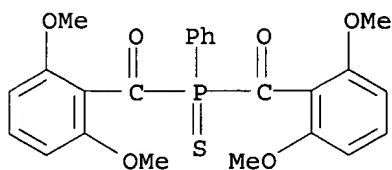
RN 176251-37-9 CAPLUS  
 CN Phosphine oxide, [2,4-bis(pentyloxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



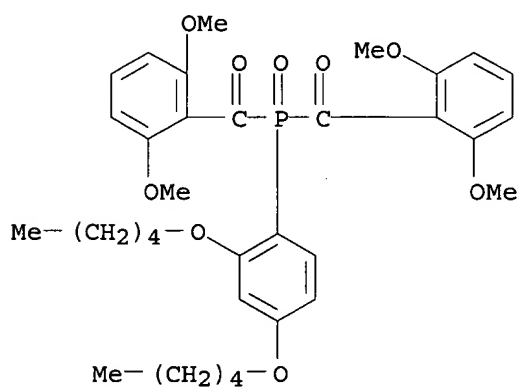
RN 270586-71-5 CAPLUS  
 CN Phosphine sulfide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



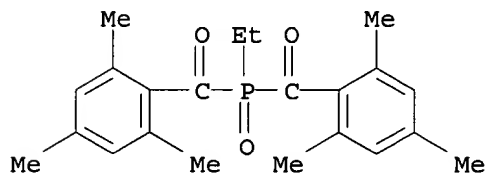
RN 270586-72-6 CAPLUS  
 CN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI) (CA INDEX NAME)



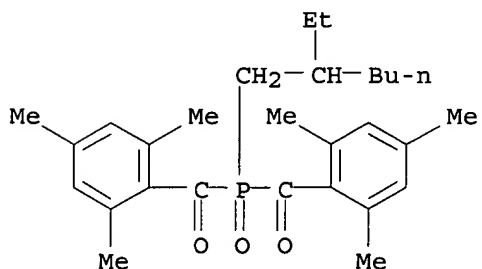
RN 270586-73-7 CAPLUS  
 CN Phosphine oxide, [2,4-bis(pentyloxy)phenyl]bis(2,6-dimethoxybenzoyl)- (9CI) (CA INDEX NAME)



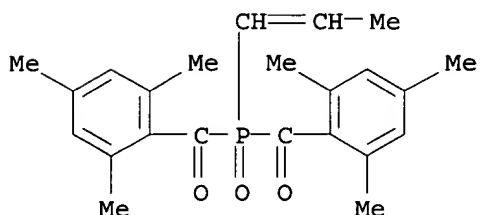
RN 270586-74-8 CAPLUS  
 CN Phosphine oxide, ethylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 270586-75-9 CAPLUS  
 CN Phosphine oxide, (2-ethylhexyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 270586-76-0 CAPLUS  
 CN Phosphine oxide, 1-propenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1994:508955 CAPLUS

DOCUMENT NUMBER: 121:108955

TITLE: Contributions to the chemistry of acylphosphines: 1-adamantylacetyl-, di-1-adamantylacetyl- and 1-adamantoylphosphines. Preparation and some reactions  
 AUTHOR(S): Goerlich, Jens R.; Mueller, Christian; Schmutzler, Reinhard

CORPORATE SOURCE: Inst. Anorg. Anal. Chem., Tech. Univ., Braunschweig, D-38023, Germany

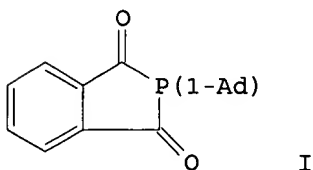
SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (1993), 85(1-4), 193-205  
 CODEN: PSSLEC; ISSN: 1042-6507

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 121:108955

GI



AB Acylphosphines of the type (1-Ad)<sub>n</sub>P[C(:O)R]<sub>3-n</sub> (n = 1, 2; R = CMe<sub>3</sub>, 1-Ad, Ph, Ad = adamantyl) were prepd. via the reaction of 1-AdPH<sub>2</sub> or (1-Ad)<sub>2</sub>PH with the corresponding carboxylic acid chlorides/NEt<sub>3</sub>. The reaction of 1-AdPH<sub>2</sub> with phthaloyl dichloride/NEt<sub>3</sub> led to the five-membered heterocycle I. In the case of n = 1, R = 1-Ad the monosubstitution product 1-AdP(H)C(:O)(1-Ad) was also obsd. 1-AdP(H)C(:O)Ph 1e was selectively formed when 1-AdPH<sub>2</sub> was allowed to react with PhC(:O)Cl/K<sub>2</sub>CO<sub>3</sub>, whereas the remaining PH-proton in 1e could be substituted by C(:O)CMe<sub>3</sub> in its reaction with Me<sub>3</sub>CC(:O)Cl/NEt<sub>3</sub> to give (1-Ad)P{C(:O)Ph}{C(:O)CMe<sub>3</sub>}. The action of trifluoroacetic acid anhydride on 1-AdPH<sub>2</sub> or (1-Ad)<sub>2</sub>PH led to the trifluoroacetyl phosphines. The reaction of 1-AdP[C(:O)CMe<sub>3</sub>]<sub>2</sub> 2a with aq. H<sub>2</sub>O<sub>2</sub> or elemental sulfur furnished the corresponding chalcogenides, with a large excess of Me iodide [1-AdPMe<sub>3</sub>]I was formed. The carbonyl complexes (L)M(CO)<sub>n</sub> (L = 2a; M = Ni, n = 3; M = Fe, n = 4) were obtained upon reaction of 2a with

Ni(CO)<sub>4</sub> and Fe<sub>2</sub>(CO)<sub>9</sub>, resp. Tris-1-adamantoylphosphine was formed as a byproduct in the reaction of P(SiMe<sub>3</sub>)<sub>3</sub> with 1-AdC(:O)Cl and was converted to the chalcogenides [1-AdC(:O)]<sub>3</sub>P(:X) (X = O, S).

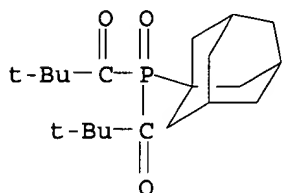
IT 156568-62-6P 156568-63-7P 156568-67-1P

156568-68-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

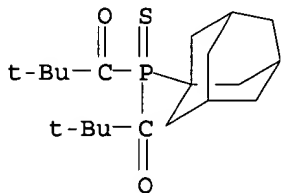
RN 156568-62-6 CAPLUS

CN Phosphine oxide, bis(2,2-dimethyl-1-oxopropyl)tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl- (9CI) (CA INDEX NAME)



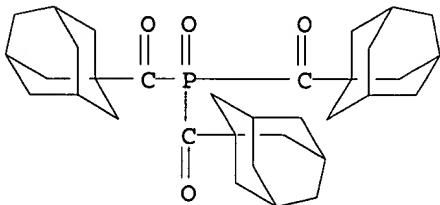
RN 156568-63-7 CAPLUS

CN Phosphine sulfide, bis(2,2-dimethyl-1-oxopropyl)tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl- (9CI) (CA INDEX NAME)



RN 156568-67-1 CAPLUS

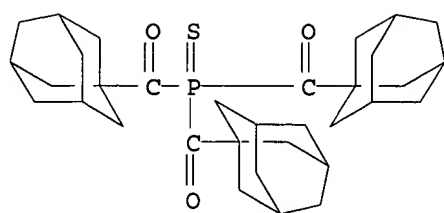
CN Phosphine oxide, tris(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylcarbonyl)- (9CI) (CA INDEX NAME)



RN 156568-68-2 CAPLUS

CN Phosphine sulfide, tris(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylcarbonyl)- (9CI) (CA INDEX NAME)





ANSWER 1 CASREACT COPYRIGHT 2003 ACS on STN

AN 105:191396 CASREACT

TI Bisacylphosphine oxide and its use

IN Ellrich, Klaus; Herzig, Christian

PA ESPE Fabrik Pharmazeutischer Praeparate G.m.b.H., Fed. Rep. Ger.

SO Ger. Offen., 19 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07F009-53

ICS C07F009-65; C08F002-50; C08K005-53; C08J003-28; C08J003-24;  
A61K006-08; G03C001-68

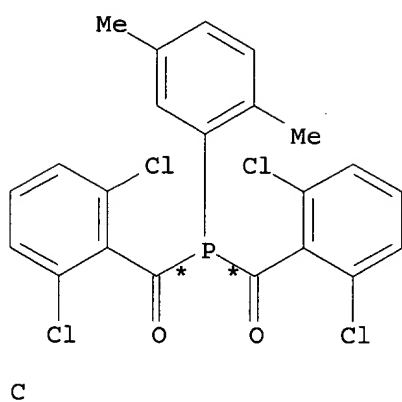
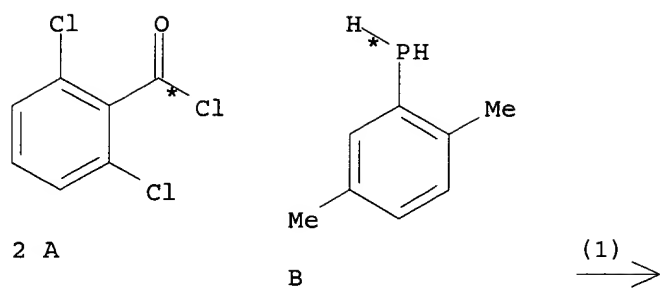
CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 37

FAN.CNT 1

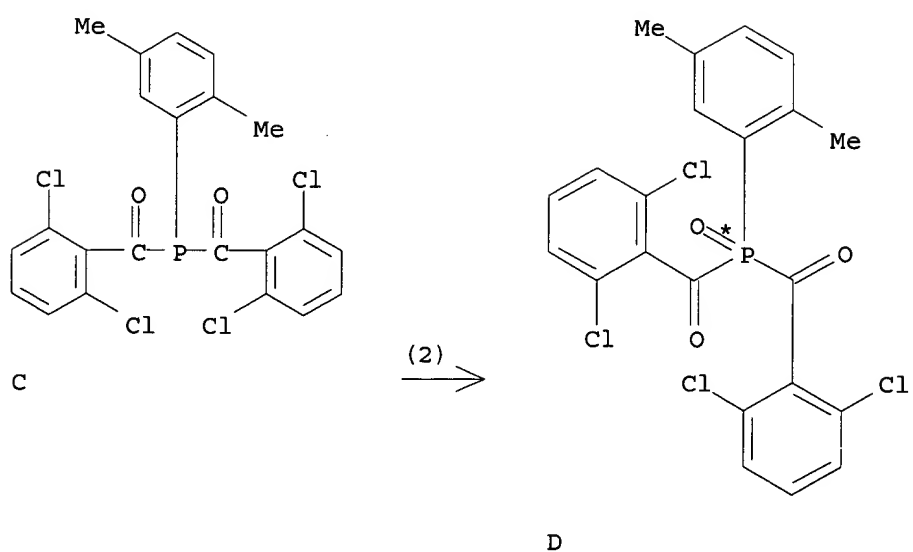
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3443221	A1	19860605	DE 1984-3443221	19841127
	EP 184095	A2	19860611	EP 1985-114908	19851125
	EP 184095	A3	19870422		
	EP 184095	B1	19890705		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 61130296	A2	19860618	JP 1985-265962	19851125
	JP 05029234	B4	19930428		
	US 4737593	A	19880412	US 1985-801339	19851125
	AT 44383	E	19890715	AT 1985-114908	19851125
	US 4792632	A	19881220	US 1987-121803	19871117
PRAI	DE 1984-3443221		19841127		
	EP 1985-114908		19851125		
	US 1985-801339		19851125		
AB	R1P(O)(COR2)(COR3) [I; R1 = alkyl, (substituted) cycloalkyl, aryl, 5- or 6-membered heterocycle; R2, R3 = (substituted) cycloalkyl, aryl, 5- or 6-membered heterocycle], useful as photoinitiators for polymn., are prepd. by oxidn. of the corresponding phosphine. Thus, 50 g (2,5-xylyl)P(CO-2,6-Cl2C6H3)2 in MeCN was treated with 150 mL 30% H2O2 at 60.degree. to give 74% I (R1 = 2,5-xylyl; R2 = R3 = 2,6-Cl2C6H3) which showed a higher rate and lower O inhibition in polymn.-initiation tests vs. a known monoacylphosphine oxide deriv.				
ST	acylphosphine oxide prepn photoinitiator polymn; oxidn acylphosphine; phosphine oxide acyl photoinitiator				
IT	Polymerization catalysts (photoinitiators, bisacylphosphine oxides as)				
IT	1565-94-2	43048-08-4			
	RL: PROC (Process) (photoinitiated polymn. of)				
IT	104890-11-1P				
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. and oxidn. of, phosphine oxide deriv. from)				
IT	104890-00-8P	104890-01-9P	104890-02-0P	104890-03-1P	104890-04-2P
	104890-05-3P	104890-06-4P	104890-07-5P	104890-08-6P	104890-09-7P
	104890-10-0P				
	RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of, as polymn. photoinitiator)				
IT	104890-12-2.				
	RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with dichlorobenzoyl chloride, bisacylphosphine from)				
IT	4659-45-4				
	RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with dimethylphosphine, bisacylphosphine from)				

RX(1) OF 3 2 A + B ==> C...



RX(1)      RCT    A 4659-45-4, B 104890-12-2  
              PRO    C 104890-11-1

RX(2) OF 3      ...C ==> D



RX(2) RCT C 104890-11-1  
PRO D 127528-10-3

=> file caplus

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FILE 'CAPLUS' ENTERED AT 18:16:59 ON 31 OCT 2003  
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FILE COVERS 1907 - 31 Oct 2003 VOL 139 ISS 19  
FILE LAST UPDATED: 30 Oct 2003 (20031030/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 17:45:00 ON 31 OCT 2003)

FILE 'CAPLUS' ENTERED AT 17:45:09 ON 31 OCT 2003

FILE 'STNGUIDE' ENTERED AT 17:45:37 ON 31 OCT 2003

FILE 'REGISTRY' ENTERED AT 17:51:12 ON 31 OCT 2003

L1 STRUCTURE UPLOADED  
L2 10 S L1  
L3 10 S L2  
L4 174 S L1 FULL  
L5 23710 S CAN  
L6 172 S L4 NOT PMS/CI  
L7 168 S L4 AND 1/NC  
L8 168 S L6 AND 1/NC  
L9 167 S L8 NOT TRIACETYL?  
L10 14 S L9 NOT BENZOYL?  
L11 167 S L9 NOT TRIS BENZOYL?  
L12 167 S L9 NOT (TRIS BENZOYL?)  
L13 167 S L9 NOT (TRIS METHOXYBENZOYL?)

FILE 'CAPLUS' ENTERED AT 17:57:00 ON 31 OCT 2003

L14 20 S L13/PREP  
L15 2 S L14 AND (ACID HALIDE OR ACID CHLORIDE OR ACID FLUORIDE)

FILE 'STNGUIDE' ENTERED AT 18:02:51 ON 31 OCT 2003

FILE 'CASREACT' ENTERED AT 18:06:26 ON 31 OCT 2003

FILE 'CAPLUS' ENTERED AT 18:16:59 ON 31 OCT 2003

=> s l14 and (magnesium or mg)  
392542 MAGNESIUM  
88 MAGNESIUMS  
392576 MAGNESIUM  
(MAGNESIUM OR MAGNESIUMS)  
1265026 MG  
1188 MGS  
1265792 MG  
(MG OR MGS)

L16 1 L14 AND (MAGNESIUM OR MG)

=> d ibib abs hitstr

L16 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:384210 CAPLUS  
DOCUMENT NUMBER: 133:4802  
TITLE: Process for preparing acylphosphines and derivatives  
INVENTOR(S): Leppard, David George; Eichenberger, Eugen; Kaeser, Rene; Hug, Gebhard; Schwendimann, Urs  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: PCT Int. Appl., 30 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000032612	A1	20000608	WO 1999-EP8968	19991120
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1135399	A1	20010926	EP 1999-973034	19991120
EP 1135399	B1	20020807		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
AT 221893	E	20020815	AT 1999-973034	19991120
JP 2002531460	T2	20020924	JP 2000-585253	19991120
ES 2180347	T3	20030201	ES 1999-973034	19991120
AU 760237	B2	20030508	AU 2000-13845	19991120
TW 492972	B	20020701	TW 1999-88120769	19991129
PRIORITY APPLN. INFO.:			CH 1998-2376	A 19981130
			CH 1998-2434	A 19981208
			WO 1999-EP8968	W 19991120

OTHER SOURCE(S): MARPAT 133:4802

AB A description is given of processes for the prepn. of mono- and bisacylphosphines and of mono- and bisacylphosphine oxides and mono- and bisacylphosphine sulfides, which comprises 1st reacting org. P-monohalophosphines or P,P-dihalophosphines, or mixts. thereof, with an alkali metal or Mg in combination with Li, where appropriate in the presence of a catalyst, and then carrying out the reaction with acid halides and, in the case of the process for the prepn. of oxides, carrying

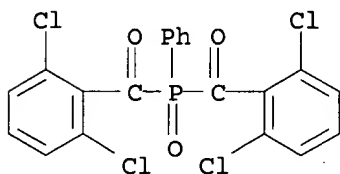
out an oxidn. step and, in the case of the prepn. of sulfides, reacting the phosphines so obtained with S. It is characteristic, inter alia, that the processes are carried out without isolation of the intermediates. E.g.,  $\text{PhPCl}_2$  was lithiated and treated with 2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>COCl followed by oxidn. with H<sub>2</sub>O<sub>2</sub> to give 85% (2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CO)<sub>2</sub>P(O)Ph. Among the approx. 20 compds. similarly prepd. were 89% (2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CO)<sub>2</sub>P(S)Ph and 68% 2,6-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>COP(O)Ph<sub>2</sub>.

IT 104890-00-8P, Bis(2,6-dichlorobenzoyl)phenylphosphine oxide  
 104890-05-3P, Bis(2,6-dimethoxybenzoyl)phenylphosphine oxide  
 151249-76-2P, Bis(2,4,6-trimethylbenzoyl)isobutylphosphine oxide  
 151249-80-8P 151249-82-0P, Bis(2,4,6-trimethylbenzoyl)octylphosphine oxide 162881-26-7P,  
 Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide 176251-37-9P,  
 Bis(2,4,6-trimethylbenzoyl)(2,4-dipentoxyphenyl)phosphine oxide  
 270586-71-5P, Bis(2,4,6-trimethylbenzoyl)phenylphosphine sulfide  
 270586-72-6P, Bis(2,6-dimethoxybenzoyl)phenylphosphine sulfide  
 270586-73-7P 270586-74-8P, Bis(2,4,6-trimethylbenzoyl)ethylphosphine oxide 270586-75-9P,  
 Bis(2,4,6-trimethylbenzoyl)(2-ethylhexyl)phosphine oxide  
 270586-76-0P, Bis(2,4,6-trimethylbenzoyl)(propen-1-yl)phosphine oxide

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of acylphosphines)

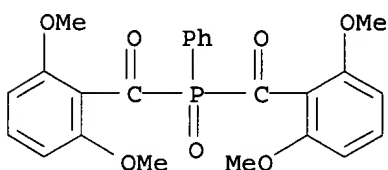
RN 104890-00-8 CAPLUS

CN Phosphine oxide, bis(2,6-dichlorobenzoyl)phenyl- (9CI) (CA INDEX NAME)



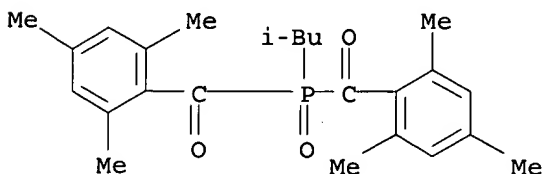
RN 104890-05-3 CAPLUS

CN Phosphine oxide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI) (CA INDEX NAME)



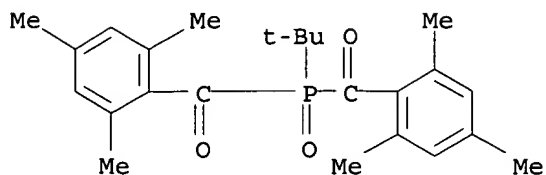
RN 151249-76-2 CAPLUS

CN Phosphine oxide, (2-methylpropyl)bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



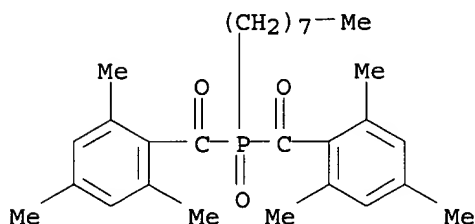
RN 151249-80-8 CAPLUS

CN Phosphine oxide, (1,1-dimethylethyl)bis(2,4,6-trimethylbenzoyl)- (9CI)  
(CA INDEX NAME)



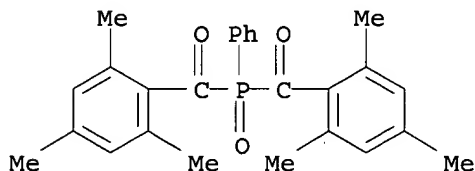
RN 151249-82-0 CAPLUS

CN Phosphine oxide, octylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



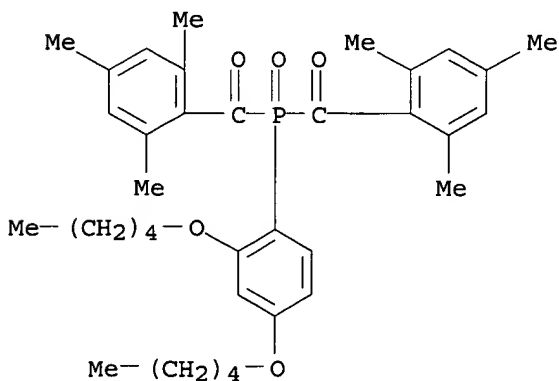
RN 162881-26-7 CAPLUS

CN Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



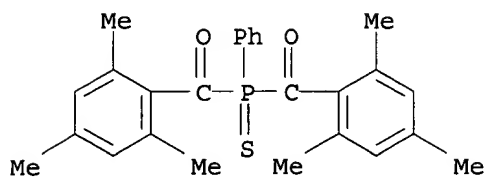
RN 176251-37-9 CAPLUS

CN Phosphine oxide, [2,4-bis(pentyloxy)phenyl]bis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



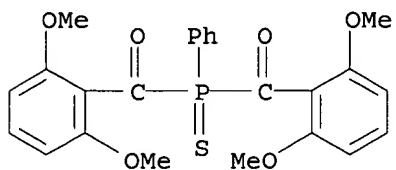
RN 270586-71-5 CAPLUS

CN Phosphine sulfide, phenylbis(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 270586-72-6 CAPLUS

CN Phosphine sulfide, bis(2,6-dimethoxybenzoyl)phenyl- (9CI) (CA INDEX NAME)



RN 270586-73-7 CAPLUS

CN Phosphine oxide, [2,4-bis(pentyloxy)phenyl]bis(2,6-dimethoxybenzoyl)- (9CI) (CA INDEX NAME)



L17 12 SEA SSS FUL L1

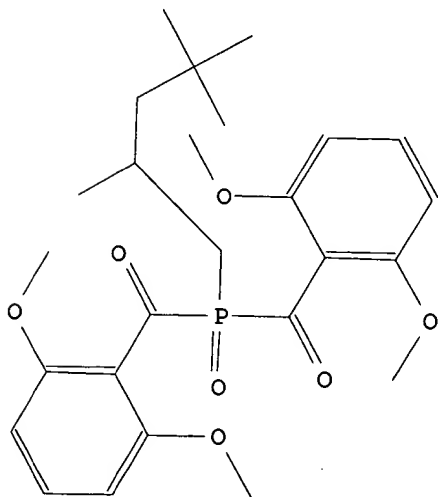
=> s l17 not pms/ci  
'CI' IS NOT A VALID FIELD CODE  
0 PMS/CI

L18 12 L17 NOT PMS/CI

=> d ide

L18 ANSWER 1 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN):	7894530
Chemical Name (CN):	bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide
Autonom Name (AUN):	<(2,6-dimethoxy-benzoyl)-(2,4,4-trimethylpentyl)-phosphinoyl>-(2,6-dimethoxy-phenyl)-methanone
Molec. Formula (MF):	C26 H35 O7 P
Molecular Weight (MW):	490.53
Lawson Number (LN):	12023, 3763, 289
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	6714557
Tautomer ID (TAUTID):	7455702
Beilstein Citation (BSO):	6-10
Entry Date (DED):	1998/07/15
Update Date (DUPD):	2003/04/17



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
FS	File Segment	1

CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
FLU	Fluorescence	2
LUM	Luminescence	2
PHO	Phosphorescence	1
UVS	UV and Visible Spectrum	1

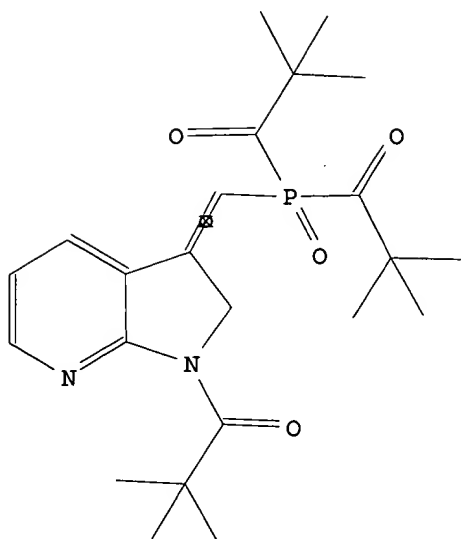
This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	2
RXREA	Substance is Reaction Reactant	2

=> d ide 2

L18 ANSWER 2 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN):	7418164
Chemical Name (CN):	1-<(2,2-dimethyl-propionyl)-<1-(2,2-dimethyl-propionyl)-1,2-dihydro-pyrrolo<2,3-b>pyridin-3-ylidenemethyl>-phosphinoyl>-2,2-dimethyl-propan-1-one
Autonom Name (AUN):	1-<(2,2-dimethyl-propionyl)-<1-(2,2-dimethyl-propionyl)-1,2-dihydro-pyrrolo<2,3-b>pyridin-3-ylidenemethyl>-phosphinoyl>-2,2-dimethyl-propan-1-one
Molec. Formula (MF):	C23 H33 N2 O4 P
Molecular Weight (MW):	432.50
Lawson Number (LN):	29951, 1176
File Segment (FS):	Stereo compound
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	6376086
Tautomer ID (TAUTID):	7052429
Beilstein Citation (BSO):	6-25
Entry Date (DED):	1996/04/26
Update Date (DUPD):	1997/02/03



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
CDISP	Compound Disposition	1

This substance also occurs in Reaction Documents:

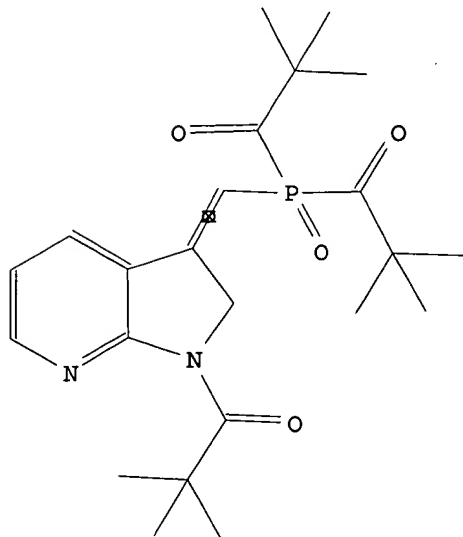
Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d ide 3

L18 ANSWER 3 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN): 7418163  
 Chemical Name (CN): 1-((2,2-dimethylpropionyl)-(1-(2,2-dimethylpropionyl)-1,2-dihydro-pyrrolo[2,3-b]pyridin-3-ylidenemethyl)-phosphinoyl)-2,2-dimethylpropan-1-one  
 Autonom Name (AUN): 1-((2,2-dimethylpropionyl)-(1-(2,2-dimethylpropionyl)-1,2-dihydro-pyrrolo[2,3-b]pyridin-3-ylidenemethyl)-phosphinoyl)-2,2-dimethylpropan-1-one

Molec. Formula (MF): C23 H33 N2 O4 P  
 Molecular Weight (MW): 432.50  
 Lawson Number (LN): 29951, 1176  
 File Segment (FS): Stereo compound  
 Compound Type (CTYPE): heterocyclic  
 Beilstein Citation (BSO): 6-25  
 Entry Date (DED): 1996/04/26  
 Update Date (DUPD): 1997/02/03  
 Compound Disposition (CDISP): Deleted BRN



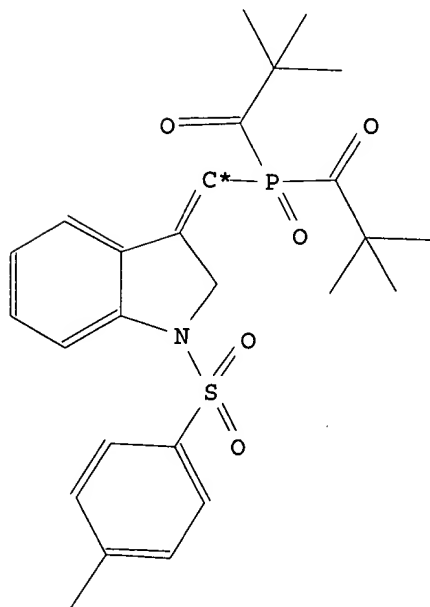
Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
FS	File Segment	1
CTYPE	Compound Type	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
CDISP	Compound Disposition	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

Beilstein Records (BRN): 7397431  
 Chemical Name (CN): 1-<(2,2-dimethyl-propionyl)-<1-(toluene-4-sulfonyl)-1,2-dihydro-indol-3-ylidenemethyl>-phosphinoyl>-2,2-dimethyl-propan-1-one  
 Autonom Name (AUN): 1-<(2,2-dimethyl-propionyl)-<1-(toluene-4-sulfonyl)-1,2-dihydro-indol-3-ylidenemethyl>-phosphinoyl>-2,2-dimethyl-propan-1-one  
 Molec. Formula (MF): C26 H32 N O5 P S  
 Molecular Weight (MW): 501.58  
 Lawson Number (LN): 27984, 13813, 1176  
 Compound Type (CTYPE): heterocyclic  
 Constitution ID (CONSID): 6300037  
 Tautomer ID (TAUTID): 6988820  
 Beilstein Citation (BSO): 6-22  
 Entry Date (DED): 1996/04/26  
 Update Date (DUPD): 1997/02/03



## Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1

TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1

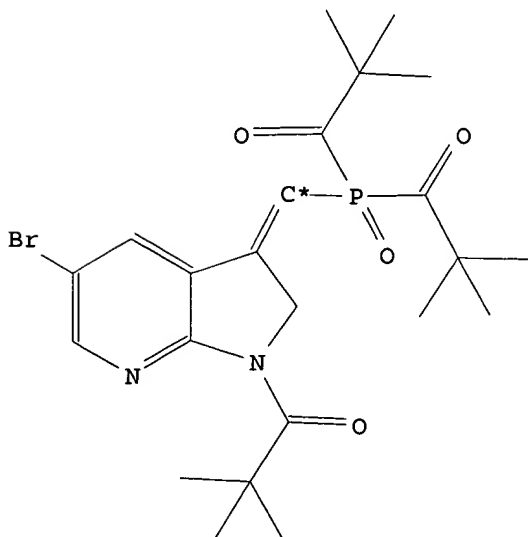
This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d ide 5

L18 ANSWER 5 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN):	7395431
Chemical Name (CN):	1-<<5-bromo-1-(2,2-dimethyl-propionyl)-1,2-dihydro-pyrrolo<2,3-b>pyridin-3-ylidenemethyl>-(2,2-dimethyl-propionyl)-phosphinoyl>-2,2-dimethyl-propan-1-one
Autonom Name (AUN):	1-<<5-bromo-1-(2,2-dimethyl-propionyl)-1,2-dihydro-pyrrolo<2,3-b>pyridin-3-ylidenemethyl>-(2,2-dimethyl-propionyl)-phosphinoyl>-2,2-dimethyl-propan-1-one
Molec. Formula (MF):	C23 H32 Br N2 O4 P
Molecular Weight (MW):	511.39
Lawson Number (LN):	29944, 1176
Compound Type (CTYPE):	heterocyclic
Constitution ID (CONSID):	6298208
Tautomer ID (TAUTID):	6957875
Beilstein Citation (BSO):	6-25
Entry Date (DED):	1996/04/26
Update Date (DUPD):	1997/02/03



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1

This substance also occurs in Reaction Documents:

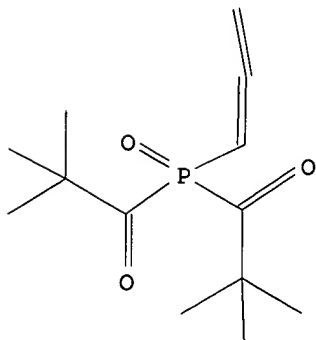
Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=>

=> d ide 6

L18 ANSWER 6 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN): 7371172  
 Chemical Name (CN): di-t-butyl-1,2-propadienylphosphonate  
 Autonom Name (AUN): 1-(2,2-dimethyl-propionyl)-propa-1,2-dienyl-phosphinoyl>-2,2-dimethyl-propan-1-one  
 Molec. Formula (MF): C13 H21 O3 P  
 Molecular Weight (MW): 256.28  
 Lawson Number (LN): 3763, 1176  
 Compound Type (CTYPE): acyclic  
 Constitution ID (CONSID): 6255211  
 Tautomer ID (TAUTID): 6913781  
 Beilstein Citation (BSO): 6-04  
 Entry Date (DED): 1996/04/26  
 Update Date (DUPD): 1997/02/03



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1

This substance also occurs in Reaction Documents:

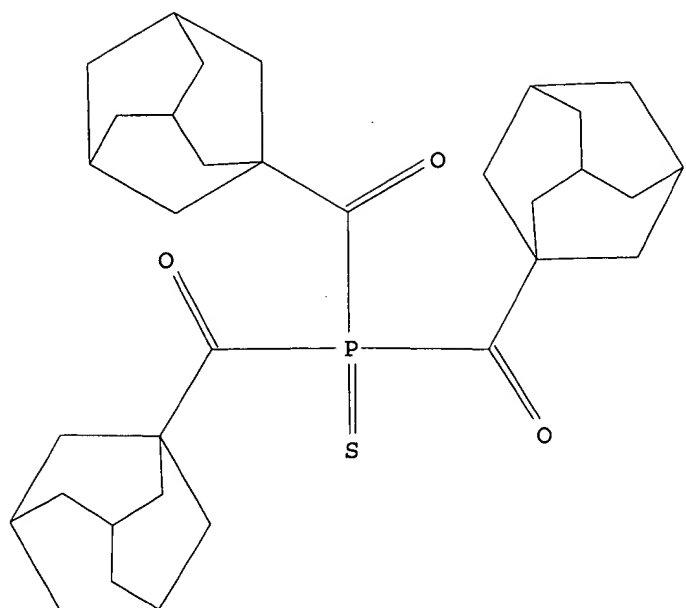
Code	Name	Occurrence
RX	Reaction Documents	3
RXREA	Substance is Reaction Reactant	3

=> d ide 7

L18 ANSWER 7 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN):	6832743
Chemical Name (CN):	Tri-(1-adamantoyl)phosphinsulfid
Autonom Name (AUN):	adamantan-1-yl-<bis-(adamantane-1-carbonyl)-phosphinothioyl>-methanone
Molec. Formula (MF):	C33 H45 O3 P S
Molecular Weight (MW):	552.75
Lawson Number (LN):	10541
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	5940804
Tautomer ID (TAUTID):	6508672
Beilstein Citation (BSO):	6-09
Entry Date (DED):	1994/10/31
Update Date (DUPD):	1995/07/28





Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	1
MS	Mass Spectrum	1
NMR	Nuclear Magnetic Resonance	2

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d ide 8]  
 '8]' IS NOT A VALID FORMAT FOR FILE 'BEILSTEIN'

The following are valid formats:

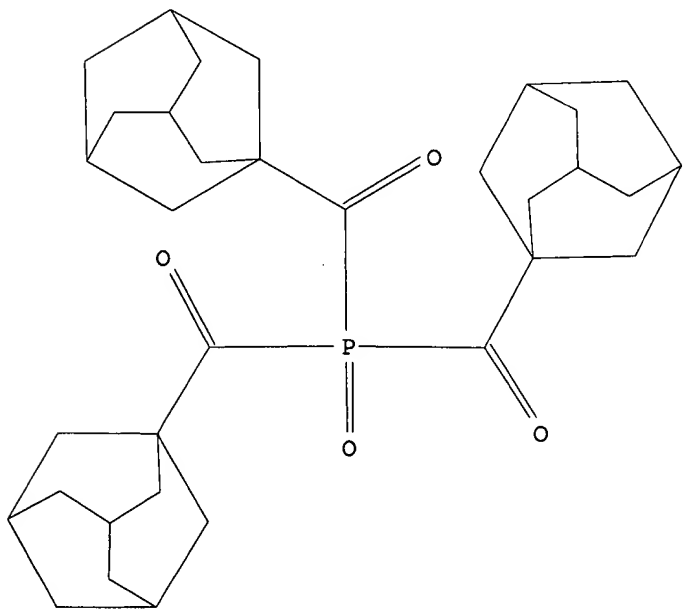
QRD ----- Query Related Data (IDE plus HIT)  
 IDE ----- Identification of Substance, plus Structure  
 ALL ----- All Display fields (Lengthy displaye)  
 CHE ----- Chemical Data  
 PHY ----- Physical Data

HIT ----- All fields containing hit terms  
 Hit terms will be highlighted in all IDE fields in the BEILSTEIN file  
 A maximum of 20 values are displayed in each single property field.  
 Use DISPLAY F<prop> for FULL format, e.g. FBP instead of BP.  
 For more information about display formats, and how to display  
 individual selected properties, enter 'HELP FORMAT' at an arrow  
 prompt, e.g. => HELP FORMAT.  
 ENTER DISPLAY FORMAT (QRD):end

=> d ide 8

L18 ANSWER 8 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN):	6832742
Chemical Name (CN):	Tri-(1-adamantoyl)phosphinoxid
Autonom Name (AUN):	adamantan-1-yl-<bis-(adamantane-1-carbonyl)-phosphinoyl>-methanone
Molec. Formula (MF):	C33 H45 O4 P
Molecular Weight (MW):	536.69
Lawson Number (LN):	10541
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	5940805
Tautomer ID (TAUTID):	6508673
Beilstein Citation (BSO):	6-09
Entry Date (DED):	1994/10/31
Update Date (DUPD):	1995/07/28



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1

AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	1
FS	File Segment	1
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	1
MS	Mass Spectrum	1
NMR	Nuclear Magnetic Resonance	4

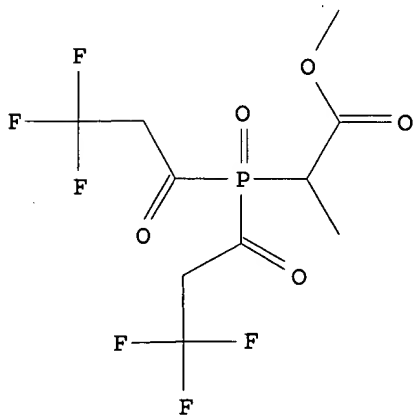
This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d ide 9

L18 ANSWER 9 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN):	6819926
Chemical Name (CN):	2-<bis-(3,3,3-trifluoro-propionyl)-phosphinoyl>-propionic acid methyl ester
Autonom Name (AUN):	2-<bis-(3,3,3-trifluoro-propionyl)-phosphinoyl>-propionic acid methyl ester
Molec. Formula (MF):	C10 H11 F6 O5 P
Molecular Weight (MW):	356.16
Lawson Number (LN):	3765, 1166, 289
Compound Type (CTYPE):	acyclic
Constitution ID (CONSID):	5907756
Tautomer ID (TAUTID):	6503782
Beilstein Citation (BSO):	6-04
Entry Date (DED):	1994/10/31
Update Date (DUPD):	1995/07/28



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	3
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1

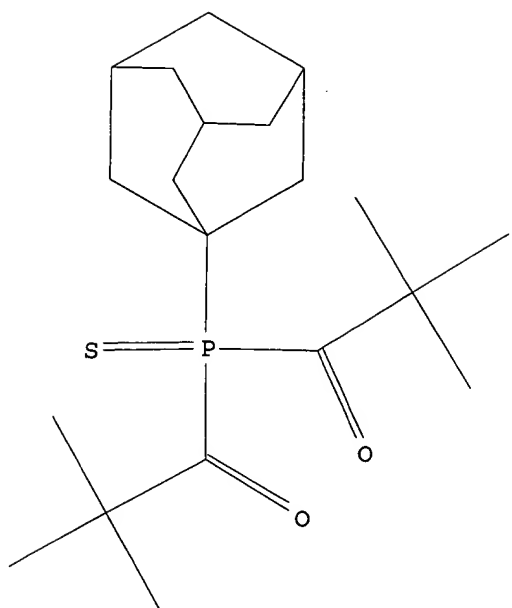
This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1
RXREA	Substance is Reaction Reactant	1

=> d ide 10

L18 ANSWER 10 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN): 6816650  
 Chemical Name (CN): 1-Adamantyldipivaloylphosphinsulfid  
 Autonom Name (AUN): 1-<adamantan-1-yl-(2,2-dimethyl-propionyl)-  
 phosphinothioyl>-2,2-dimethyl-propan-1-one  
 Molec. Formula (MF): C20 H33 O2 P S  
 Molecular Weight (MW): 368.51  
 Lawson Number (LN): 16731, 1176  
 Compound Type (CTYPE): isocyclic  
 Constitution ID (CONSID): 5913477  
 Tautomer ID (TAUTID): 6469797  
 Beilstein Citation (BSO): 6-16  
 Entry Date (DED): 1994/10/31  
 Update Date (DUPD): 1995/07/28



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	1
MS	Mass Spectrum	1
NMR	Nuclear Magnetic Resonance	2

This substance also occurs in Reaction Documents:

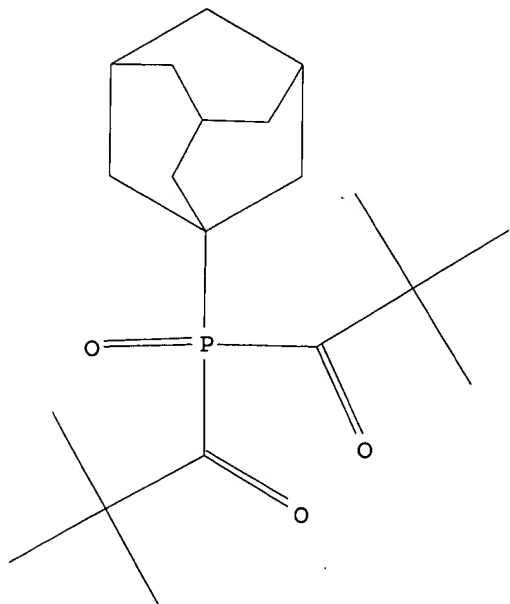
Code	Name	Occurrence
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1

=> d ide 11

L18 ANSWER 11 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN): 6816596  
 Chemical Name (CN): 1-Adamantyldipivaloylphosphinoxid  
 Autonom Name (AUN): 1-<adamantan-1-yl-(2,2-dimethyl-propionyl)-  
 phosphinoyl>-2,2-dimethyl-propan-1-one  
 Molec. Formula (MF): C20 H33 O3 P

Molecular Weight (MW):	352.45
Lawson Number (LN):	16731, 1176
Compound Type (CTYPE):	isocyclic
Constitution ID (CONSID):	5911536
Tautomer ID (TAUTID):	6467881
Beilstein Citation (BSO):	6-16
Entry Date (DED):	1994/10/31
Update Date (DUPD):	1995/07/28



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
CN	Chemical Name	1
AUN	Autonomname	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1
TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
MP	Melting Point	1
MS	Mass Spectrum	1
NMR	Nuclear Magnetic Resonance	4

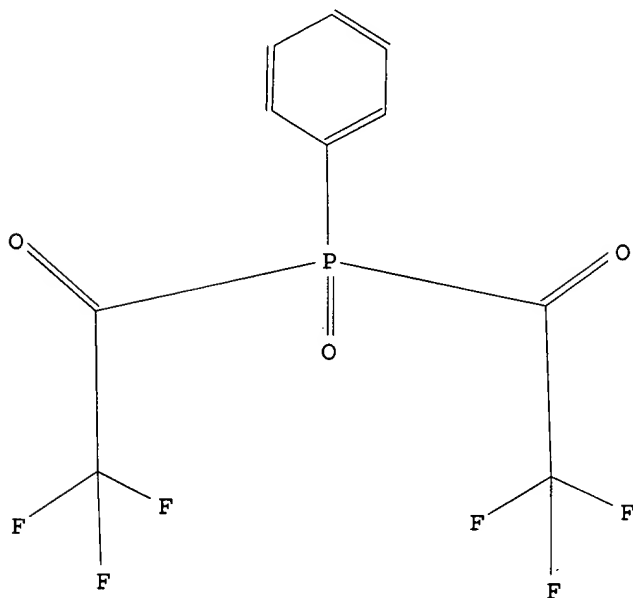
This substance also occurs in Reaction Documents:

Code	Name	Occurrence
RX	Reaction Documents	1

=> d ide 12

L18 ANSWER 12 OF 12 BEILSTEIN COPYRIGHT 2003 BEILSTEIN CDS MDL on STN

Beilstein Records (BRN): 2885761  
Beilstein Pref. RN (BPR): 40207-54-3  
CAS Reg. No. (RN): 40207-54-3  
Chemical Name (CN): Bis-trifluoracetyl-benzolphosphonsaeure  
Molec. Formula (MF): C10 H5 F6 O3 P  
Molecular Weight (MW): 318.11  
Lawson Number (LN): 16731, 1157  
Compound Type (CTYPE): isocyclic  
Constitution ID (CONSID): 2599598  
Tautomer ID (TAUTID): 2717404  
Beilstein Citation (BSO): 5-16  
Entry Date (DED): 1989/07/11  
Update Date (DUPD): 1989/07/26



Field Availability:

Code	Name	Occurrence
BRN	Beilstein Records	1
BPR	Beilstein Preferred RN	1
RN	CAS Registry Number	1
CN	Chemical Name	1
MF	Molecular Formula	1
FW	Formular Weight	1
LN	Lawson Number	2
CTYPE	Compound Type	1
CONSID	Constitution ID	1

TAUTID	Tautomer ID	1
BSO	Beilstein Citation	1
ED	Entry Date	1
UPD	Update Date	1
BP	Boiling Point	1
IR	Infrared Spectrum	1
MS	Mass Spectrum	1

This substance also occurs in Reaction Documents:

Code	Name	Occurrence
=====	=====	=====
RX	Reaction Documents	1
RXPRO	Substance is Reaction Product	1